



## **Campus Design Context Overview**

UNIVERSITY OF CALIFORNIA, MERCED

2014

University of California, Merced  
5200 North Lake Road  
Merced, California 95343

<http://2020project.ucmerced.edu>



The Campus Design Context Overview document provides an introduction to the physical setting, landscape, public realm, and building design concepts that have shaped UC Merced's physical environment.

The conceptual diagrams, informational examples and images incorporated into the document are not intended to be prescriptive requirements.

Rather, they provide an illustration of what has worked well in the past and today, and they identify concepts that are important to carry forward in the 2020 Project.





**SOUTHWEST AERIAL VIEW OF UC MERCED, 2013**

UC MERCED IS A RESEARCH UNIVERSITY LOCATED 5 MILES FROM DOWNTOWN MERCED AND ADJACENT TO LAKE YOSEMITE.

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## OUR 21<sup>ST</sup> CENTURY OPPORTUNITY

Since opening in 2005, UC Merced has been committed to developing a physical presence that will model a healthier future for the region, the state and the world.

In 2013, the Regents of the University of California amended UC Merced's 2009 Long Range Development Plan (LRDP) to facilitate development of the 2020 Project and enable the campus to grow to 10,000 students.

UC Merced's goal for the 2020 Project is to create a collaborative, mixed use research and educational environment for students, faculty and staff while demonstrating how communities might develop to support and sustain social, economic, and environmental health for current and future generations.

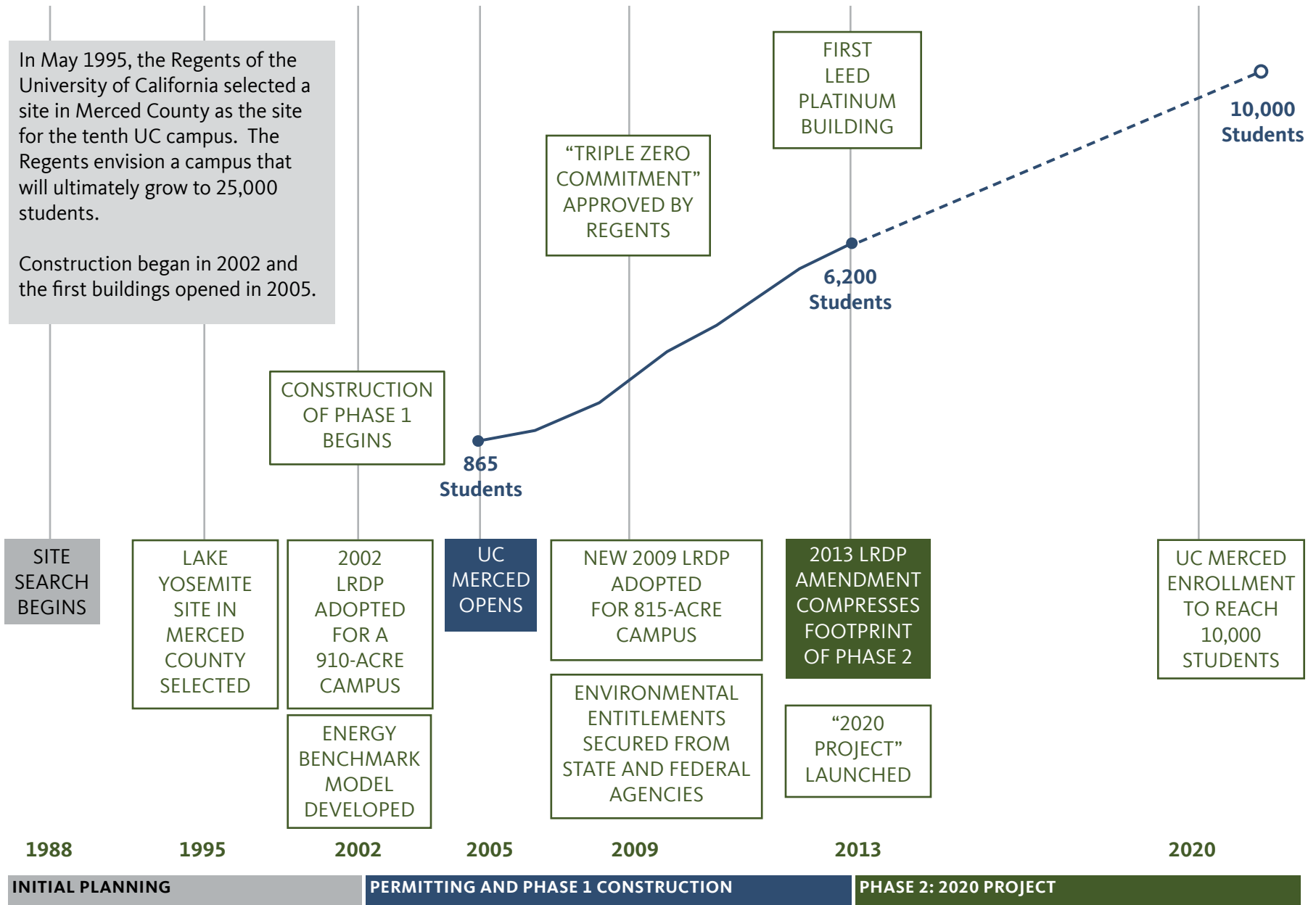
The hope is that this approach will produce a campus whose architecture, urban planning, infrastructure, and landscape are uniquely regional in character and model sustainable design excellence for application on a global scale.



**BEGINNINGS SCULPTURE**

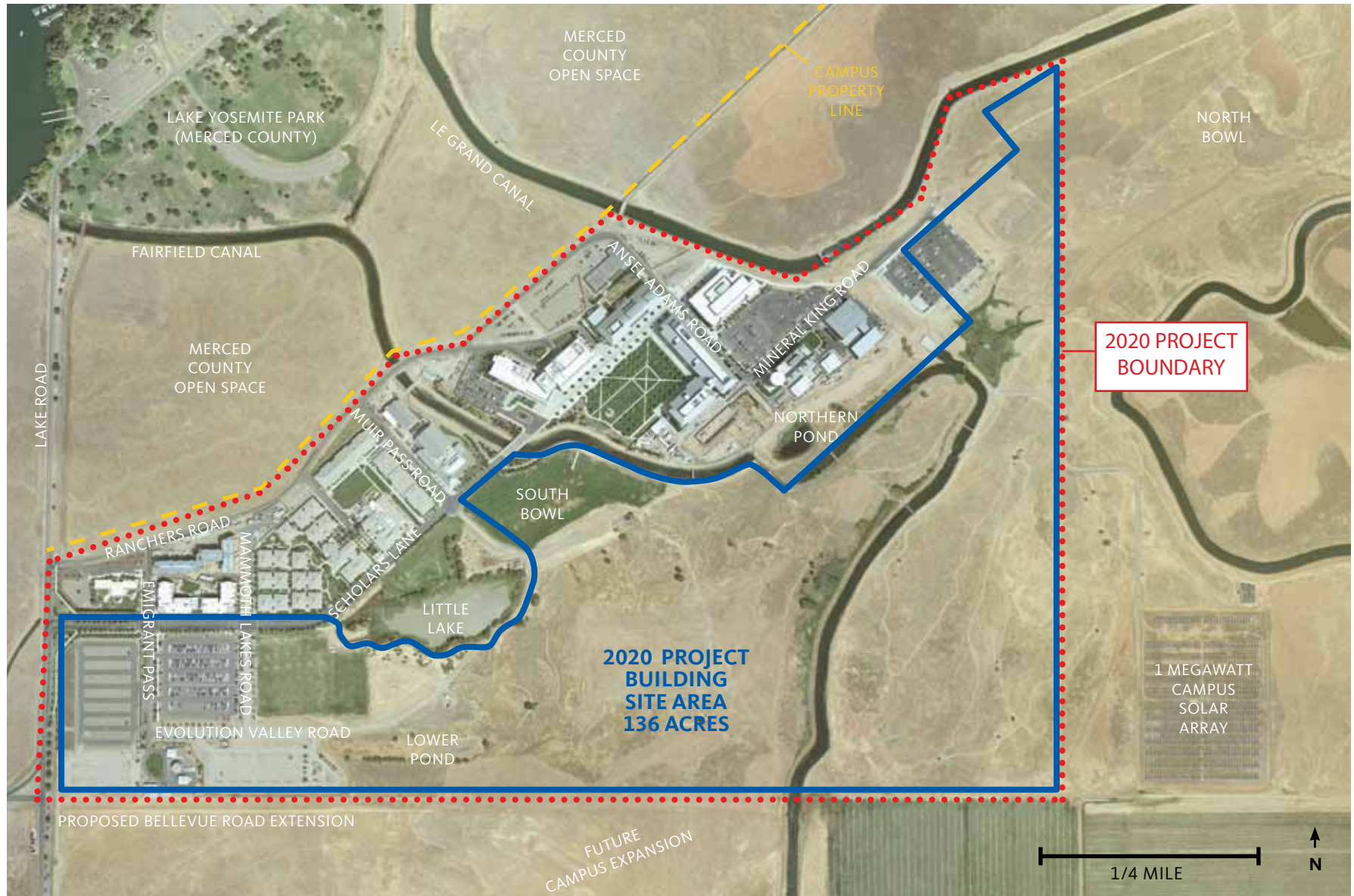
THE 40-FOOT TALL, STAINLESS STEEL "BEGINNINGS" SCULPTURE IS THE PRIMARY ICONIC FEATURE ON CAMPUS.

## TIMELINE





## UNIVERSITY OF CALIFORNIA, MERCED (2014)





## THE PROJECT SITE

The 219 acre 2020 Project site includes 83 acres of campus buildings and 136 acres of largely undeveloped land. It is bounded by Merced County open space to the north, Lake Road to the west, University owned land to the east, and jointly-owned University land to the south.

The undeveloped portion sits in a topographic depression that undulates approximately 25 feet below the existing campus and includes four large surface parking lots. Two unlined, gravity-fed agricultural irrigation canals operated by the Merced Irrigation District (MID), pursuant to an easement, weave through



### EXISTING BUILDINGS

ACADEMIC DISTRICT BUILDINGS ARE CLUSTERED AROUND A 4-ACRE QUADRANGLE. HOUSING AND STUDENT SERVICES ARE ALIGNED IN A NEIGHBORHOOD ALONG SCHOLARS LANE.



### LOOKING NORTH FROM 2020 PROJECT SITE TO EXISTING CAMPUS BUILDINGS

THE CURRENT CAMPUS INCLUDES 1.3 MILLION GROSS SQUARE FEET OF FACILITIES, 1,700 BUILT BEDS AND 2,000 PARKING SPACES SERVING 6,200 STUDENTS AND 1,300 STAFF.

## KEY 2020 DESIGN GOALS

- Compact development that takes advantage of existing infrastructure
- Creative mixed-use facilities
- Progress towards UC Merced's "triple zero" sustainability goals
- Amenities for a campus population of 10,000 students
- Developing an iconic "front door to the campus" capturing the spirit of the University's academic mission
- Crafting an open space network and public realm that enhances the campus environment

### COMPACT DEVELOPMENT



NOVARTIS CAMPUS  
BASEL, SWITZERLAND

### CREATIVE MIXED-USE FACILITIES



MAIN STREET  
UNIVERSITY OF CINCINNATI

### ENHANCED OPEN SPACE AND PUBLIC REALM



BROCHSTEIN PAVILION  
RICE UNIVERSITY

### AMENITIES FOR STUDENT LIFE



TALLEY STUDENT UNION  
NORTH CAROLINA STATE UNIVERSITY

### ICONIC AND WELCOMING "FRONT DOOR"



PALM DRIVE  
STANFORD UNIVERSITY

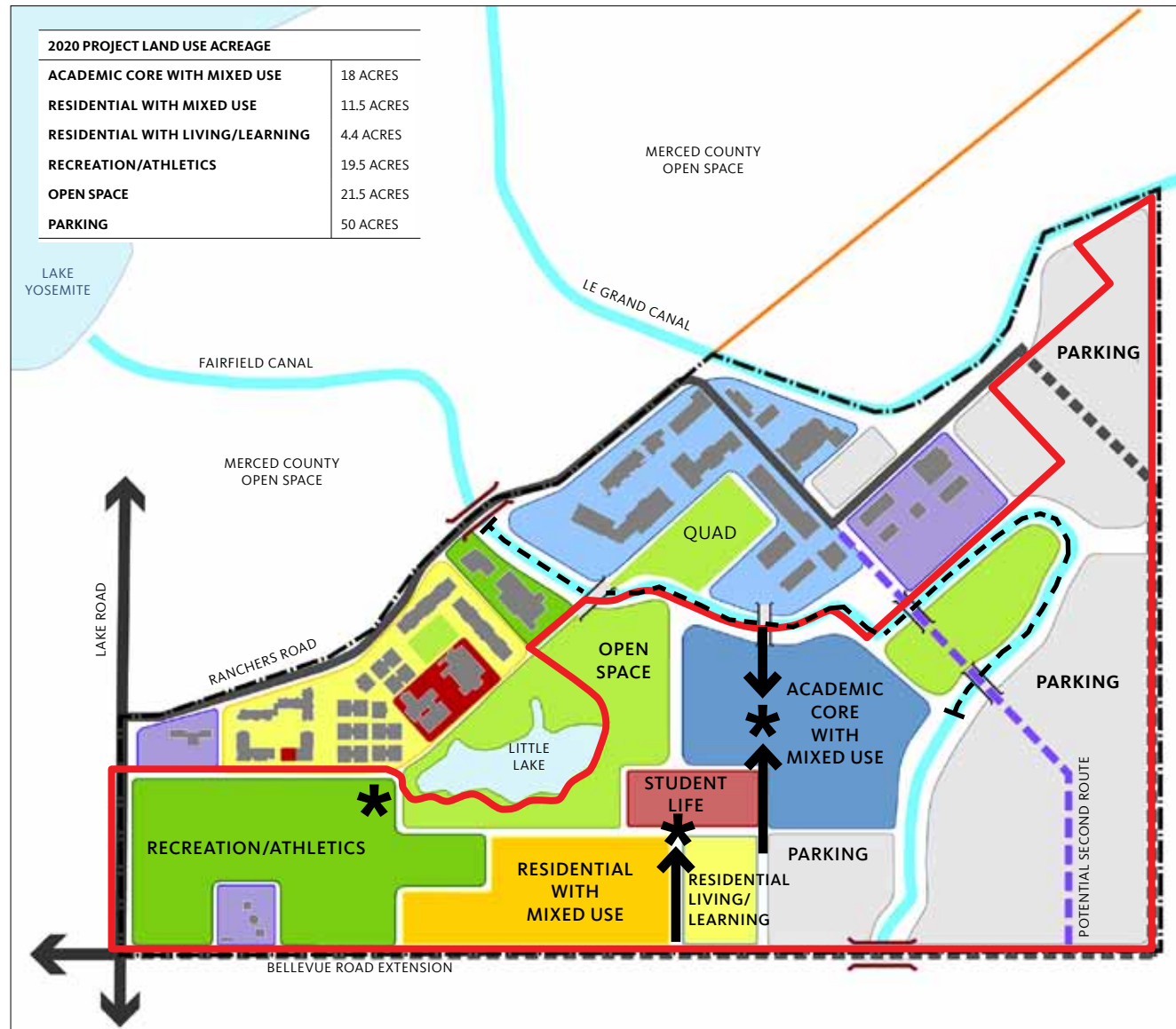
### TRIPLE ZERO COMMITMENT



SOLAR SUN SHADES  
UNIVERSITY OF CALIFORNIA, MERCED



# 2020 ILLUSTRATIVE FRAMEWORK



THIS MAP IS ILLUSTRATIVE AND NOT INTENDED TO BE INTERPRETED AS A LAND USE PLAN. IT SHOWS THE EXISTING CAMPUS FOOTPRINT, INDICATES POTENTIAL LAND USE ADJACENCIES AND OUTLINES THE PROGRAMMATIC SCOPE OF THE 2020 PROJECT.



## LEGEND

### EXISTING

- ACADEMIC
- RESIDENTIAL
- STUDENT LIFE
- CAMPUS SERVICES
- EXISTING BUILDING FOOTPRINT

### 2020 PROJECT

- ACADEMIC CORE WITH MIXED USE
- RESIDENTIAL WITH MIXED USE
- RESIDENTIAL WITH LIVING/LEARNING
- STUDENT LIFE  
STUDENT CENTER  
RETAIL OPPORTUNITIES  
DINING SERVICES
- RECREATION/ATHLETICS  
SPORTS FIELDS  
RECREATION FIELDS  
AQUATIC CENTER  
INDOOR RECREATION
- OPEN SPACE
- PARKING
- ACTIVITY NODE  
GATHERING PLACE FOR CASUAL  
OR CHANCE INTERACTIONS
- 2020 BUILDING AREA  
SITE BOUNDARY
- 2020 PROJECT AREA
- CAMPUS BOUNDARY
- PEDESTRIAN CORRIDOR
- VEHICULAR BRIDGE
- PEDESTRIAN BRIDGE
- PROPOSED ROAD
- OPTIONAL ROAD
- MID CANAL
- POTENTIAL FOR CANAL  
RELOCATION USING DIRECT  
UNDERGROUND PIPE

## 2020 PROJECT OBJECTIVES: CONNECTIONS TO THE EXISTING CAMPUS

The Campus Design Context Overview is an advisory informational tool for development of the 2020 Project.

The examples within the document are not prescriptive rules. They instead identify the existing context and principles that have guided UC Merced's building, public realm and landscape.

### AUDIENCE FOR THE OVERVIEW

This document provides information to design professionals to help conceptualize a coherent, exceptional character for campus expansion while nurturing a culture of sustainability and pedestrian-oriented mobility.

### HOW TO USE THE OVERVIEW

The premise of the document is that good design should derive from a thoughtful design-led response to the site rather than a rigid application of standards.

It is expected that design teams consider these guiding characteristics and build upon the foundational legacy of sustainable placemaking. Design teams should bear in mind that the spaces between buildings — specifically, open spaces, streets, plazas, courtyards, pathways and canals — and the edges of development that carry infrastructure, are equal elements in shaping campus culture and identity.

Sustainability is at the core of UC Merced's design, facilities management and academics. UC Merced has adopted a "triple zero commitment" to achieve zero net energy, zero net greenhouse gas emissions, and zero landfill waste for future development through design innovation and best practices. While not specifically part of the triple zero commitment, the campus is also firmly committed to reducing water consumption on campus. The document articulates strategies that have been used to support these goals.

The Campus Design Context Overview was developed with an eye towards highlighting opportunities to enhance systems that lead to cost-effective, sustainable development and operation of the campus.

This Overview is inspired in part by the 2009 LRDP and the 2010 Physical Design Framework which detail policies and strategies to ultimately accommodate 25,000 students and 12,500 beds. The 2020 Project is the intermediate step towards that goal.

While the LRDP provides principles and policies to guide overall campus development, the Overview provides an introductory summary to inform design teams of what has worked well on the campus.

### KEY ELEMENTS OF EXCEPTIONAL PROJECTS AT UC MERCED

- **INTEGRATES** natural and built systems
- Exemplifies **INNOVATION** in planning, design, and the use and applications of materials and technology
- Promotes daily **INTERACTION** among students, faculty, staff and the community
- Reflects an **IDENTITY** derivative of, and unique to, the San Joaquin Valley's cultural, historical, and environmental context
- Provides **INSPIRATION** for sustainable design and development of livable communities





UC MERCED, LOOKING WEST, 2014.  
TWO AGRICULTURAL IRRIGATION CANALS WEAVE THROUGH THE SITE. THE MERCED IRRIGATION DISTRICT OPERATES THE CANALS SUBJECT TO 150 FOOT WIDE EASEMENTS.





**UC MERCED TODAY:**

- 6,200 STUDENTS (2013-14)
- 5% GRADUATE STUDENTS
- 97% FROM CALIFORNIA
- 29% LIVE ON CAMPUS
- 1,300 FACULTY AND STAFF
- MAJORITY OF STUDENTS ARE THE FIRST IN THEIR FAMILIES TO ATTEND A 4-YEAR UNIVERSITY

**THE 2020 PROJECT GOAL:**

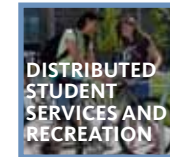
- 10,000 STUDENTS BY 2020
- 10% GRADUATE STUDENTS BY 2020
- 50% OF STUDENTS LIVING ON CAMPUS BY 2020
- UP TO 1.85 MGSF OF NEW FACILITIES BY 2020



# OVERVIEW AT A GLANCE

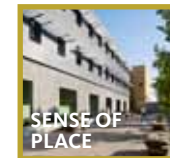
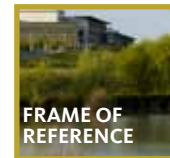
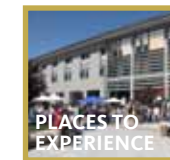
## LAND USE PLANNING PRINCIPLES

DEVELOP A MIXED USE ACADEMIC DISTRICT  
CREATE LIVING/LEARNING PEDESTRIAN-ORIENTED NEIGHBORHOODS  
PROGRAM MIXED USE STUDENT SERVICES AND RECREATION  
MAXIMIZE EXISTING INVESTMENTS IN INFRASTRUCTURE



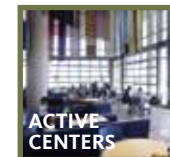
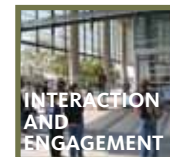
## BUILDING DESIGN PRINCIPLES

CREATE A DISTINCTIVE URBAN ENVIRONMENT  
EMBRACE THE VALLEY'S UNIQUE ARCHITECTURAL IDENTITY  
SUPPORT PLACES TO EXPERIENCE  
DEVELOP A WELL DEFINED SKYLINE  
ESTABLISH A SYMBOLIC PRESENCE  
ESTABLISH A LEGIBLE FRAME OF REFERENCE  
NURTURE A SENSE OF PLACE  
COMMIT TO A HIGH QUALITY PUBLIC REALM  
ASPIRE TO A TIMELESS, RESILIENT QUALITY  
CREATE A MODEL OF SUSTAINABLE PLACEMAKING



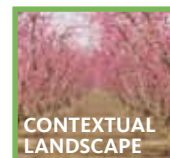
## PUBLIC REALM PRINCIPLES

PROGRAM BUILDINGS TO FOSTER INTERACTION AND ENGAGEMENT  
CREATE ACTIVE CENTERS OR POINTS OF CONNECTION  
DESIGN PATHWAYS TO DYNAMICALLY CONNECT PEOPLE AND PLACES  
NURTURE A COHERENT AND CONSISTENT FABRIC



## LANDSCAPE DESIGN PRINCIPLES

CREATE A REGIONALLY CONTEXTUAL LANDSCAPE  
CREATE A CONNECTED CAMPUS LANDSCAPE  
CREATE A TEACHING LANDSCAPE  
CREATE SIGNATURE PLACES  
CREATE A SUSTAINABLE LANDSCAPE





## REGIONAL VICINITY



**DOWNTOWN MERCED**  
A CLASSIC SAN JOAQUIN VALLEY DOWNTOWN



**SUBURBAN SCALED HOUSING DEVELOPMENTS**  
PLANNED FOR WEST OF THE CAMPUS



**MULTI-BILLION DOLLAR AGRICULTURAL INDUSTRY**  
DEFINES MERCED'S LANDSCAPE AND ECONOMY

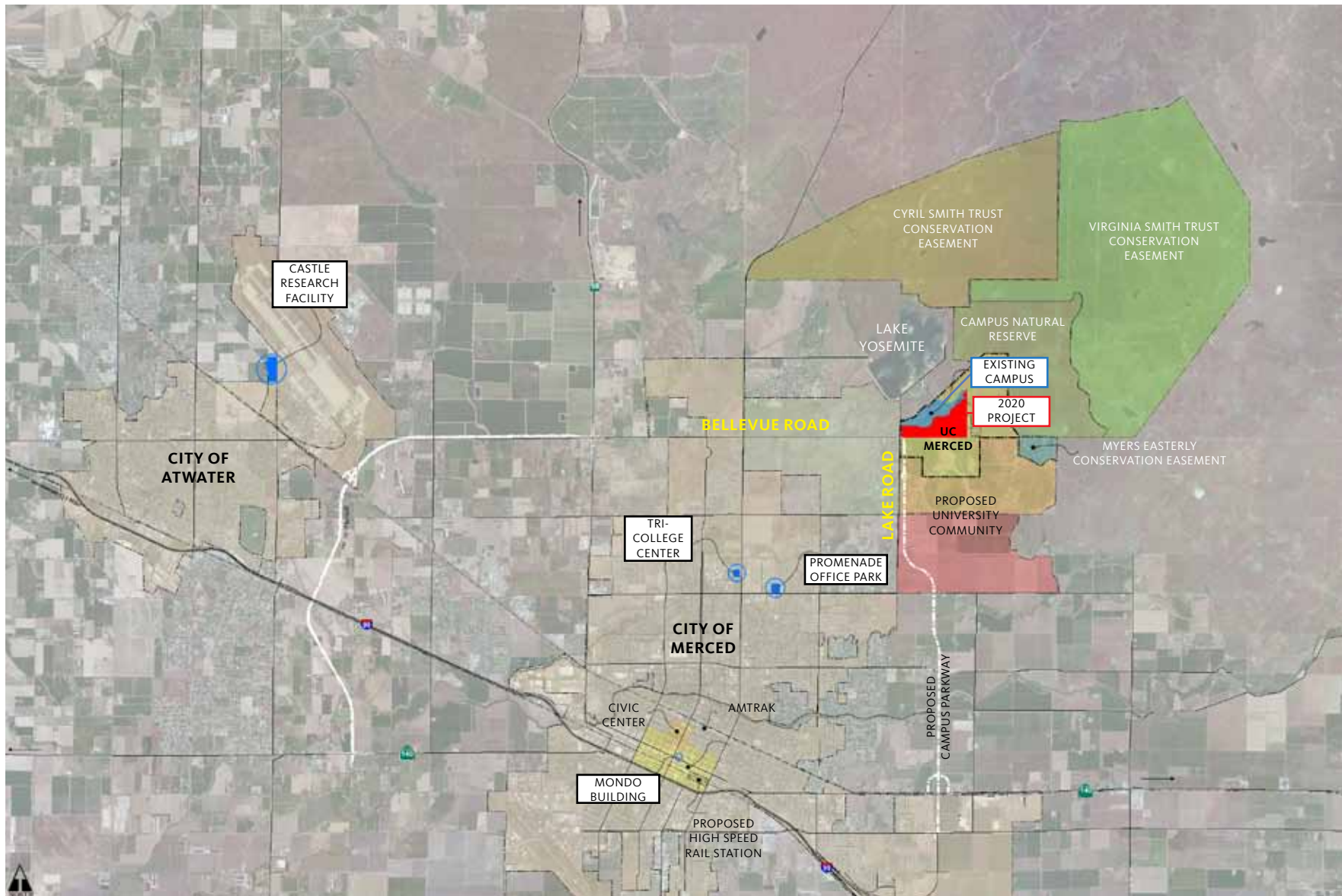


**NORTHEAST VIEW OF CAMPUS CONSTRUCTION IN 2002**  
THE SIERRA NEVADA AND PERMANENTLY PROTECTED WETLANDS EDGE THE NORTHERN  
AND EASTERN CAMPUS BOUNDARIES



**VERNAL POOL GRASSLANDS**  
30,000 ACRES OF VERNAL POOL GRASSLANDS  
EDGE THE CAMPUS





#### UC MERCED'S 815-ACRE SITE

THE CAMPUS IS LOCATED 5 MILES FROM DOWNTOWN MERCED AND IS BORDERED ON THE EAST BY PERMANENTLY PRESERVED GRASSLANDS. THE CAMPUS ALSO LEASES FACILITIES AT CASTLE AIRPORT, THE MONDO BUILDING, TRI-COLLEGE CENTER AND THE PROMENADE. A RESIDENTIAL/RETAIL "UNIVERSITY COMMUNITY" HAS BEEN PROPOSED ALONG THE SOUTHERN BORDER OF THE CAMPUS.







# LAND USE PLANNING PRINCIPLES







The 2020 Project envisions a collaborative, mixed use expansion that integrates the existing campus with an expanded community defined by a sustainable living and learning environment.

Students, faculty and researchers will share classrooms and outdoor spaces, the transit system will provide access to the heart of the campus, connections to open space will be deliberate, and recreation opportunities will be prominent.

## THE SITE

The 2020 Project site slopes to the southwest towards Lake Road and towards the City of Merced.

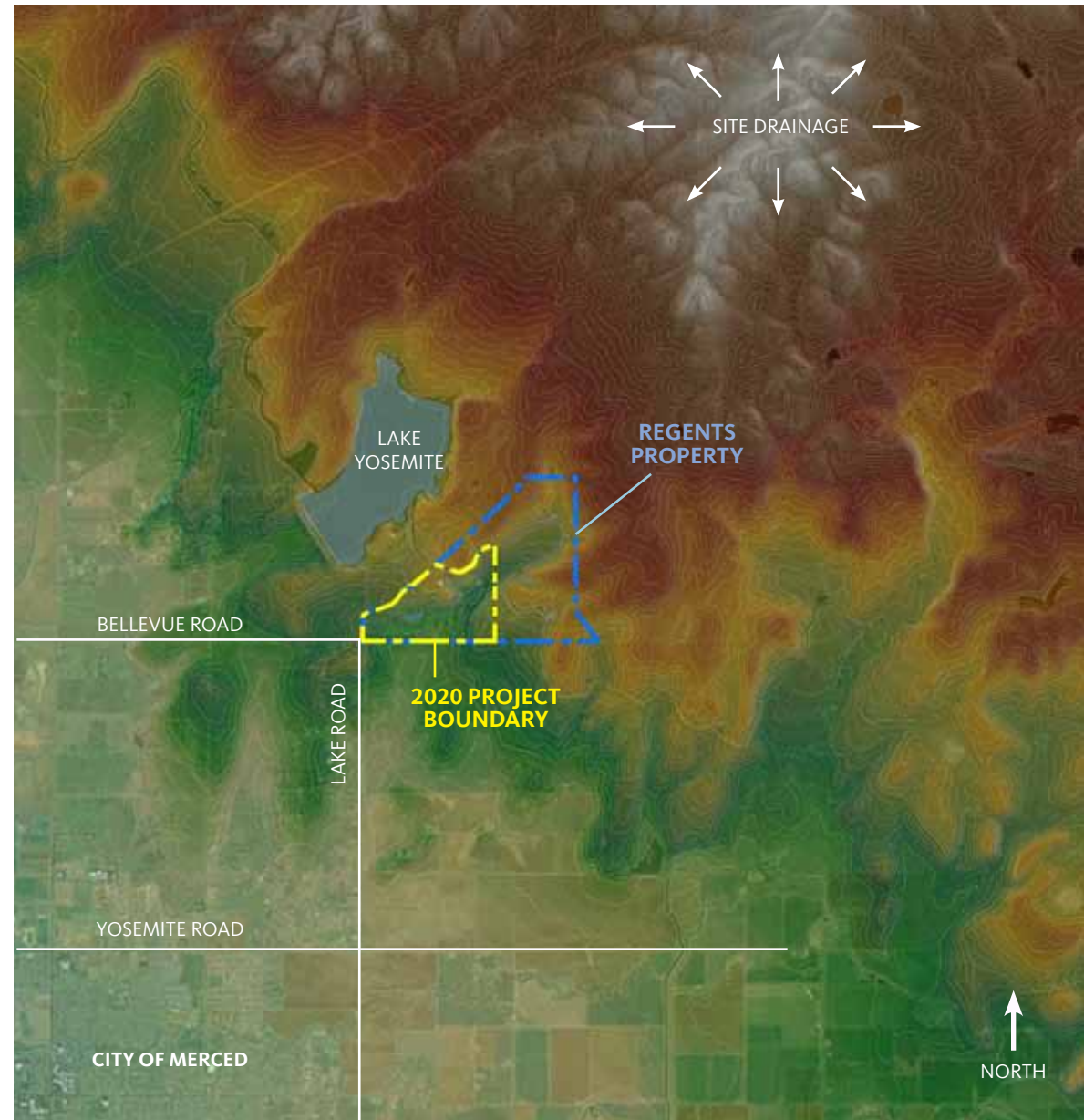
Two natural depressions, the “North Bowl” and the “South Bowl”, convey stormwater downstream from the adjacent grasslands. The existing stormwater conveyance system is designed to convey runoff from a 10 year, 24 hour storm. The current management approach is to use the South Bowl, Little Lake, bioswales and reservoirs to detain and release water.

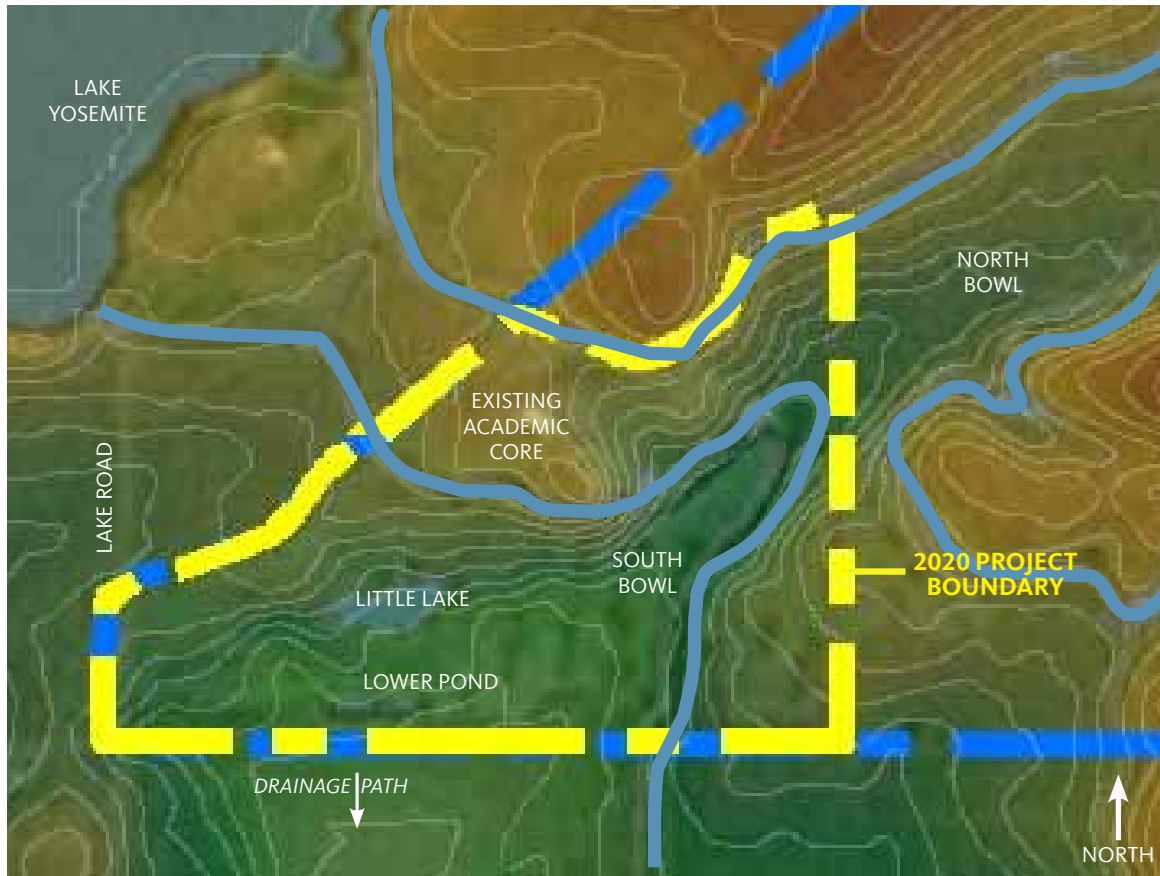
Attention to both functions requires that implementation simultaneously serve practical stormwater requirements and create an attractive, well-programmed space.

The site experiences great swings in climate. It is subject to intense, dry summer heat with afternoon temperatures above 100°F and it also experiences significant drops in winter to the 30s. After winter rains, dense “tule fog” can shut out the sun for extended periods. This presents obvious challenges to building energy and environmental performance.

Despite being located in the agriculturally rich San Joaquin Valley, the soil on the 2020 Project site is largely acidic, gravelly and of low fertility. Clay hardpan is common within three feet of the surface. Much of the land on the site consists of a thin layer of soil above impervious rock. This limits groundwater recharge potential and encourages runoff.

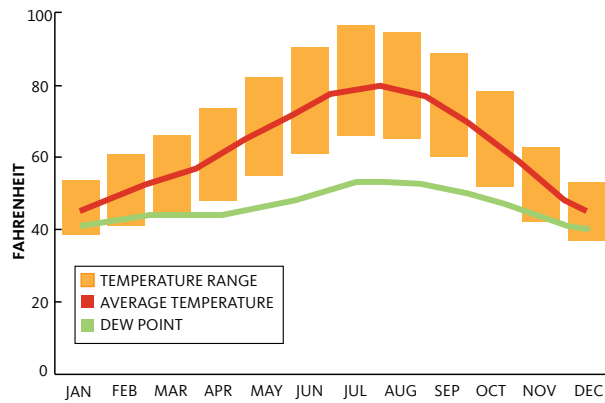
## TOPOGRAPHY



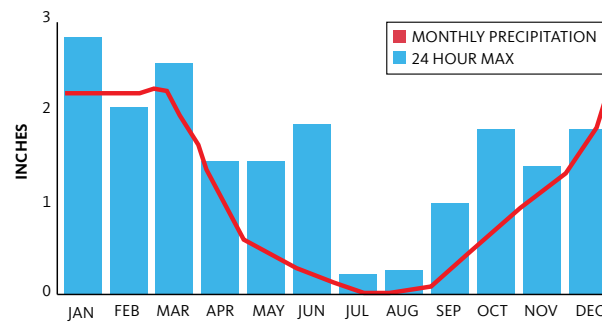


VIEW FROM 2020 SITE TO EXISTING BUILDINGS

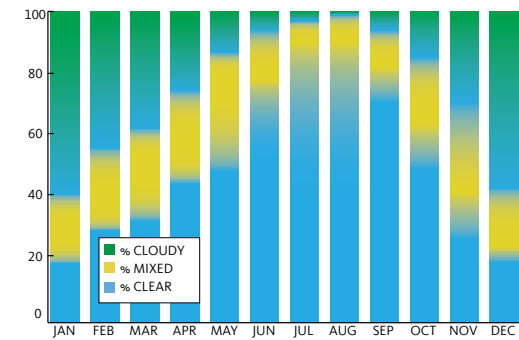
## TEMPERATURE: HOT SUMMERS



## PRECIPITATION: WET WINTERS

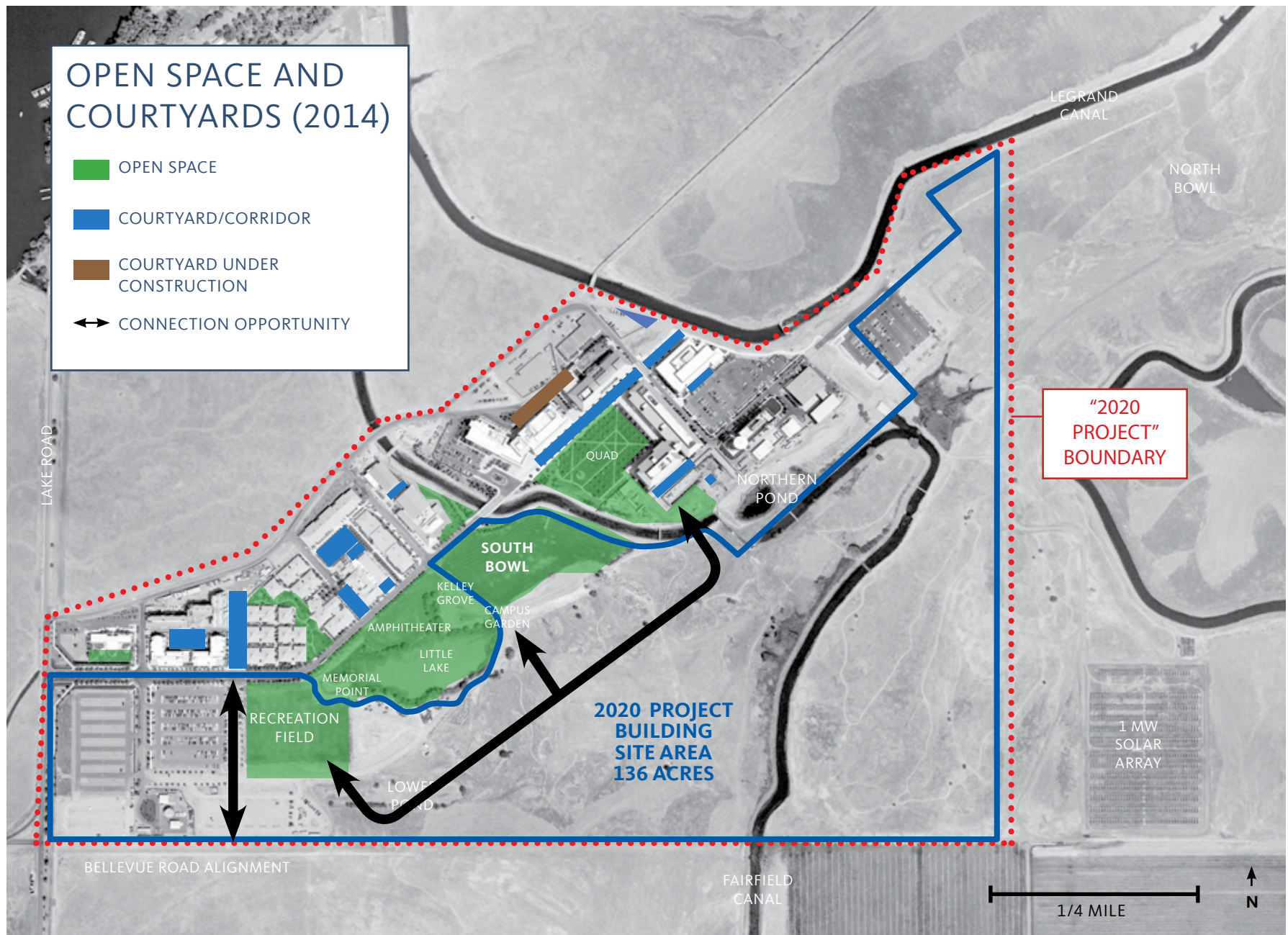


## SKY CONDITIONS: 300 DAYS OF SUN

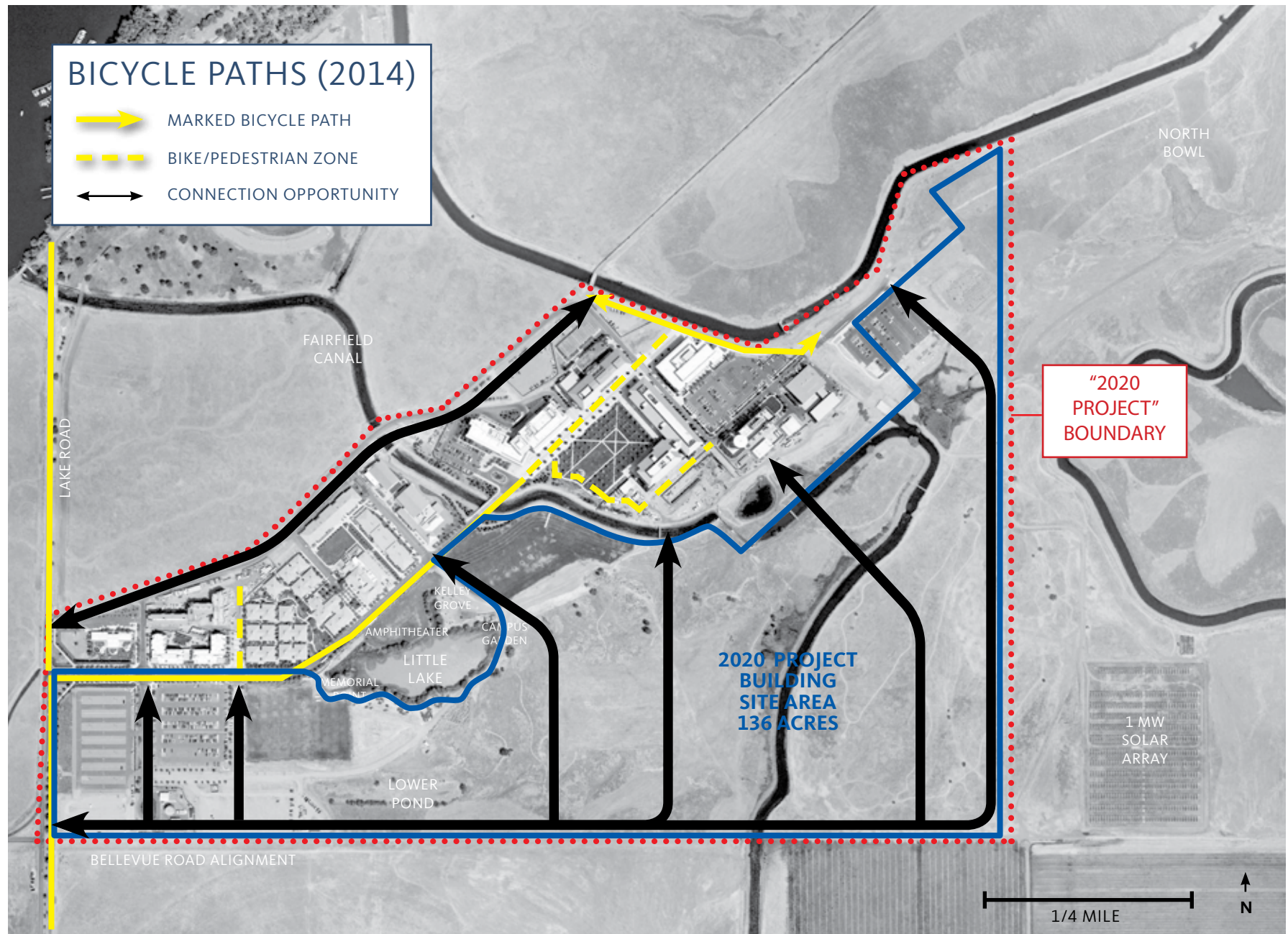


Extensive current and historic climate data is available via the Western Regional Climate Center web site, <http://www.wrcc.dri.edu>.

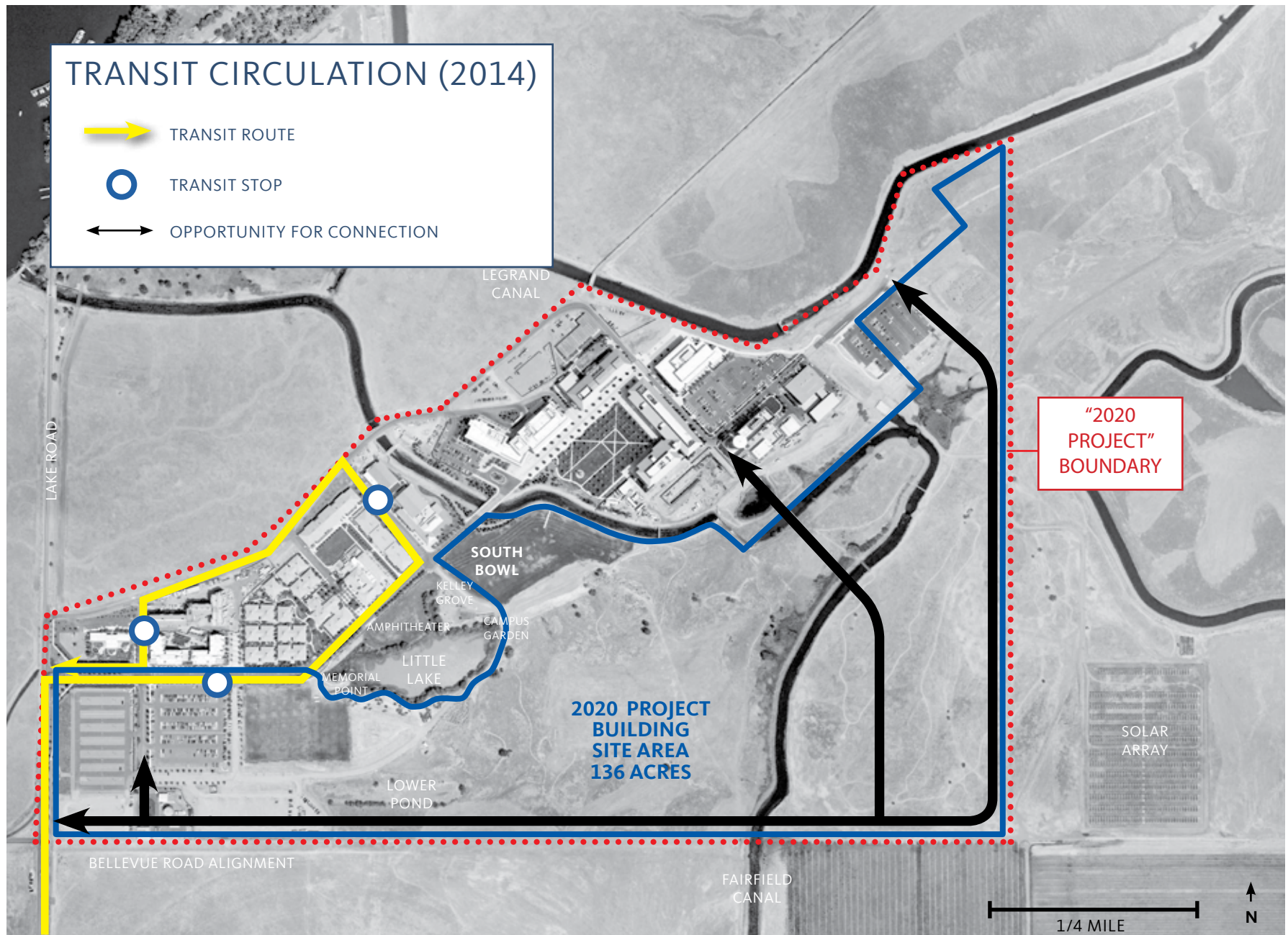




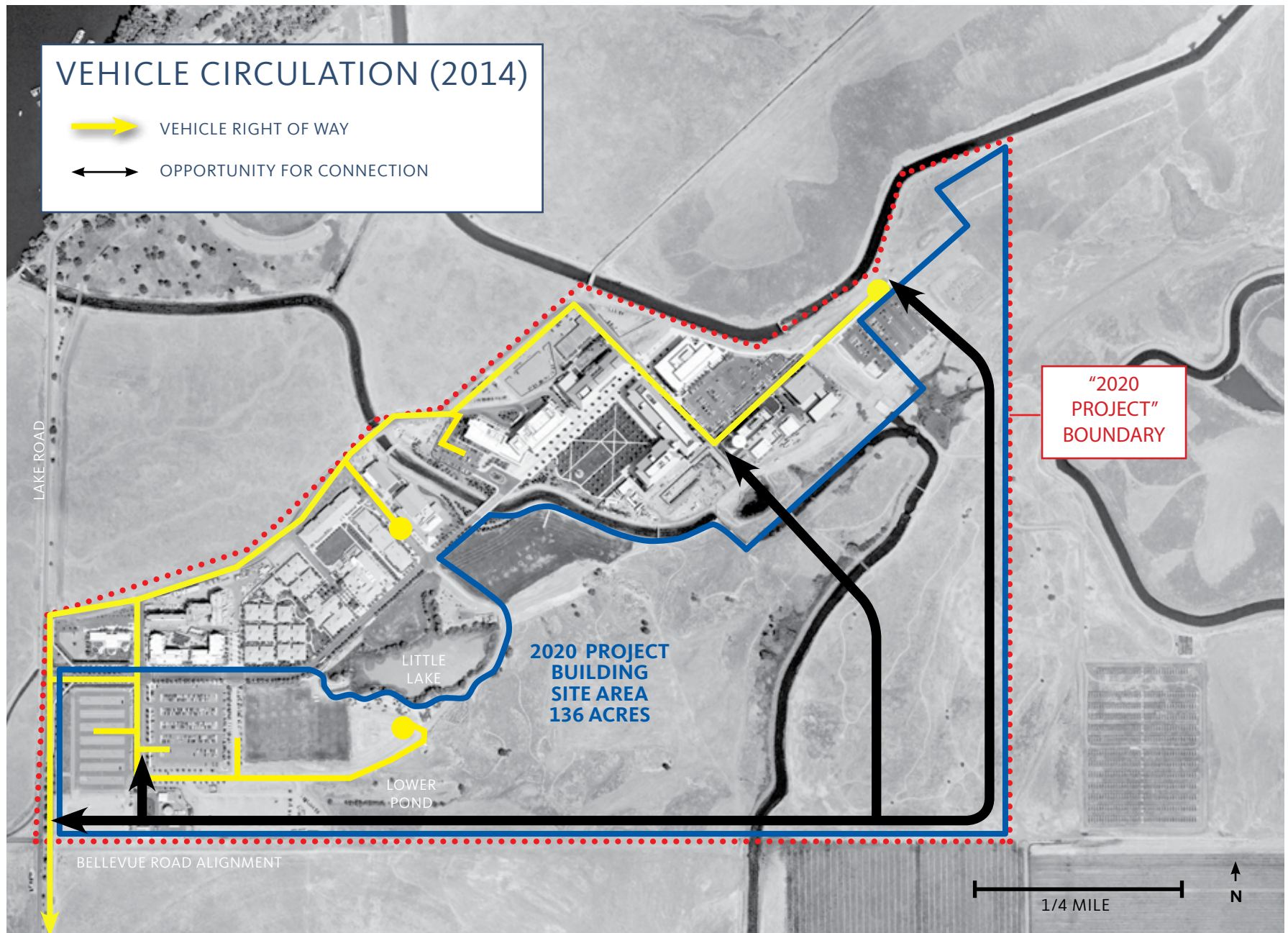














## DEVELOP A MIXED USE ACADEMIC DISTRICT

FACILITATE INTERDISCIPLINARY INTERACTION INDOORS AND OUTDOORS AMONG FACULTY, STUDENTS AND STAFF

The academic mixed use core in the 2020 Project is defined by teaching, research and administrative activities.

The focus is on maintaining interactions and connections between academic and research programs and across disciplines.

The character and arrangement of facilities, classrooms and labs should emphasize academic-oriented interactions and sustainability in ways that reinforce interactive learning.

### MIXED USE COMPONENTS

The mixed use academic core is suggested to have social spaces, technology, meeting spaces, services and food along with academic functions. It should be located close to the existing academic core, across the Fairfield Canal, connected by a pedestrian bridge. Proximity and physical connection of the existing and new academic facilities will lend to an inspiring and dynamic learning environment, providing opportunities for interdisciplinary scholarly activities. It also allows for shared spaces among different disciplines and reduces programmatic redundancy.



THE LANTERN, KOLLIGIAN LIBRARY  
UNIVERSITY OF CALIFORNIA, MERCED



ARBUCKLE PAVILION  
STANFORD UNIVERSITY



STATA CENTER  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

## ILLUSTRATIVE CONCEPTS

COMPLEMENTARY BUILDING  
SETBACKS AND ALIGNED STREETWALL

PEDESTRIAN ARCADES WITH  
MULTIPLE ENTRANCES

TRANSPARENT FACADE BEHIND  
ARCADES AND SHADING TO ENGAGE  
AND ACTIVATE PUBLIC STREET



### BUILDING DESIGN

- Design flexible facilities, classrooms, and labs to support evolving programs
- Integrate buildings to function as part of pedestrian arcade system where climactically appropriate
- Use multiple entrances to buildings to activate streets, intersections and courtyards
- Organize buildings and arcades to address streets and courtyards

### PUBLIC REALM DESIGN

- Use buildings to form streetwall along major circulation corridors
- Use connections through buildings to support pedestrian shortcuts
- Make ground floor building activity visible to pedestrians
- Facilitate cross-campus connections with mid-block passages
- Use building setbacks similar to those in urban settings to define the edges of sidewalks and open space
- Create shade with wide, shaded arcades or through relationships with neighboring buildings

### LANDSCAPE DESIGN

- Articulate hardscape on main pedestrian routes
- Use shaded, cool to the touch seating (i.e. not metal) and furnish courtyards within academic blocks
- Limit use of lawns to focal point or passive recreational/social use areas
- Select and place trees to reinforce urban pattern of connected streets



## CREATE LIVING/LEARNING PEDESTRIAN ORIENTED NEIGHBORHOODS

DEVELOP A VITAL, ACTIVE “LIVING/LEARNING” CULTURE THAT MAKES ON-CAMPUS LIVING DESIRABLE

To foster interaction and engagement on campus, student housing should have components of academic multi-purpose space, food and student advisory services. It is also suggested to include a “living/learning district,” envisioned as classrooms on the ground level with student housing on upper levels.

Residential space is also expected to be developed along a corridor providing an opportunity for a defined and vibrant entrance to the campus with pedestrian-oriented uses at the street level, which could end at a Student Life Center.

### MULTIPURPOSE AND ADVISING SPACE

Student neighborhoods should include programming for advising, space for student groups and opportunities for food to create “living/learning communities.” Dining and recreation will be clustered within neighborhoods to provide a central hub of vitality at the ground level and to energize neighborhoods with pedestrian activity. Wide sidewalks, small plazas, public art and common use spaces should encourage pedestrian activity through programming. Ground floors should incorporate the building’s most public and active spaces in order to activate the street.



LANDER HALL, MIXED USE HOUSING  
UNIVERSITY OF WASHINGTON



INFORMAL SOCIAL SPACES  
THE SUMMITS



LIVING/LEARNING OPPORTUNITIES  
STUDENT HOUSING SHOULD INCLUDE ACADEMIC MULTIPURPOSE SPACE



## ILLUSTRATIVE TYPE

COURTYARDS SHADED WITH TREE CANOPY

BUILDING MASSING TAKES ADVANTAGE OF VIEWS

STUDENT SERVICES PROVIDE  
NODE OF ACTIVITY

LAWNS ONLY USED WHERE PASSIVE ACTIVITY  
IS PROGRAMMATICALLY CONTEMPLATED



## BUILDING DESIGN

- Protect pedestrians from sun and rain along major pedestrian routes using arcades or other strategies
- Locate public or common rooms along ground floors
- Optimize balconies or casual and incidental use common areas on upper levels to take advantage of featured views or distant vistas

## PUBLIC REALM DESIGN

- Cluster residence hall housing around interior courtyards to create a baseline of activity and interaction
- Use building forms, porches, arcades and common facilities at the ground level to shape the street and engage the public realm at entries
- Use corner intersection and mid-block entrances to activate the street and encourage through-block short cuts
- Design pathways and sidewalk width for heavy use

## LANDSCAPE DESIGN

- Combine hardscape with the selective use of passive lawns in the courtyards
- Create shade with canopy trees in residential courtyards to provide outdoor comfort in warm months and reduce heat island effect of hardscapes
- Design landscape for low water and long-term low-maintenance, with plantings selected for drought tolerance, durability and hard use

## PROGRAM MIXED USE STUDENT SERVICES AND PEDESTRIAN CORRIDORS

CREATE A DISTINCTIVE, LINEAR PEDESTRIAN ORIENTED CORRIDOR CONNECTING THE EXISTING CAMPUS, THE 2020 PROJECT, AND OPEN SPACE, AND LOCATE SERVICES CONVENIENTLY WITHIN ACTIVITY NODES

Student services along an active, mixed use corridor and also within activity nodes can include recreation opportunities, student unions, and skill development and counseling services, as well as convenience and food services.

### MIXED USE COMPONENTS

The illustrative overview orients student services, retail and dining throughout the student services nodes in order to achieve a high level of convenience for students and to activate key intersections and pathways with extended activity in the evenings and on weekends to create a 24-hour, urban-like environment.



MAIN STREET  
UNIVERSITY OF CINCINNATI



## ILLUSTRATIVE TYPE

PROGRAMMED GROUND FLOORS ALONG  
MAJOR PEDESTRIAN ROUTES

MAJOR FACILITIES LOCATED NEAR TRANSIT  
STOPS FOR CONVENIENT ACCESS

FLEXIBILITY TO ALLOW CAMPUS AND PRIVATE  
VENDOR-PROVIDED STUDENT SERVICES



## BUILDING DESIGN

- Arrange program for generalized functions and lounges
- Create visible student activity spaces
- Develop zones for socialization
- Maximize user exposure to activities
- Integrate interior and exterior activity areas to connect formal and informal program areas

## PUBLIC REALM DESIGN

- Orient along weather-protected pathways and arcades where possible
- Integrate informal seating into streetscape and along access pathways to student service functions to allow for casual gatherings and support social encounters
- Support infrastructure for mobile dining venues and wireless connectivity
- Design pathways and sidewalks for heavy use

## LANDSCAPE DESIGN

- Use distinctive hardscape, attractive lighting and shaded seating in plazas
- Consider low-water ornamental and native plantings in structured settings
- Use well positioned, unprogrammed and shaded lawns for passive use
- Consider regularly placed deciduous street trees to shade walking areas in hot weather and permit available sun in winter
- Clear wayfinding and signage



## OPEN SPACES

### ORGANIZE BUILDINGS AROUND SHARED OPEN SPACES

The goal is to protect existing natural resources and create high quality open spaces that support UC Merced's goals of sustainable development integrated with the built environment.

The South Bowl and Little Lake act as signature open space features. They serve as important shared gathering spaces and settings for cultural and active outdoor facilities in addition to passive and active recreation. Landscaped with a combination of native grasses, water features and recreation functions, building projects along the edge of these features are favored with inspirational interior views.

Projects can vary building forms and optimize views to the water and riparian landscapes that edge the lake and canals.

These major open spaces also serve as integral elements of the campus stormwater management system to address retention during major storm events. Since the open spaces serve double duty as stormwater retention and flood control elements, the ground level of adjacent buildings typically sits well-above the adjacent landscape and provide opportunities for terraces and belvederes. Public access functions that overlook the South Bowl must be realized in the programming, planning and design of the facility.



#### THE SOUTH BOWL

AN ORIENTING OPEN SPACE FOR THE CAMPUS THAT ACTS AS A STORMWATER MANAGEMENT RESOURCE AND AS A DESTINATION FOR GATHERING OR FOR LARGE OUTDOOR EVENTS.

## ILLUSTRATIVE

ALIGNED BUILDING FORMS FRAME  
CENTRAL OPEN SPACE

GLASS CURTAIN WALLS ON  
NORTHERN FACADES TAKE  
ADVANTAGE OF NATURAL LIGHT  
AND VIEWS

LINEAR LANDSCAPING AT STREET  
EDGES CONTRAST WITH INFORMAL  
PLANTINGS ON OPEN SPACE

OPEN SPACES DOUBLE  
AS FLOOD PLAINS

BALCONIES AND TERRACES  
OVERLOOK OPEN SPACE



## BUILDING DESIGN

- Capture views of external open space with balconies, terraces and conference rooms
- Allow views of open space from arcades around perimeter
- Prepare site to provide elevation over open space and protection from heavy storms

## PUBLIC REALM DESIGN

- Frame the edges of major open spaces located next to streets with streetwall frontage to create an expansive outdoor room
- Use terraces as potential emergency access pathways. However, they should be planned as pedestrian priority zones

## LANDSCAPE DESIGN

- Select indigenous, native, or adaptive plant species
- Select a variety of plants to encourage biodiversity
- Use artificial turf or low-water, drought tolerant lawn grass for recreational fields only in active play and practice areas
- Use low scale non-intrusive plantings to preserve views in view corridors
- Ensure shaded outdoor seating provides access to views
- Contrast formal linear plantings at building edges with natural, episodic plantings within the bowl to heighten the contrast between the built and natural landscape



## MIXED-USE RECREATION

### ATHLETICS, INTRAMURAL RECREATION AND STUDENT SERVICES CREATE FRONT DOOR OPPORTUNITY

As a potential component of the “front door” experience for the 2020 Project, the recreationally focused area between Bellevue Road and Scholars Lane provides an opportunity to orient, welcome and host visitors and “create an address” for the public face of the campus.

The Athletics and Recreation district will include sports fields, recreation fields, indoor athletics and recreation functions and an aquatic center. It is suggested to be located at the southwest corner of the Project Site, creating a strong presence at the intersection of Lake Road and Bellevue Road.

The aquatic center could potentially be located on Scholars Lane creating a vibrant activity node on a primary pedestrian street.

### POTENTIAL COMPONENTS

- Intramural Recreation fields and courts
- NCAA-level sports fields
- Aquatics Center
- Parking for spectators, visiting teams and residents in adjacent neighborhoods
- Facility arrangement to accommodate large non-recreation events, summer student sports and academic programs
- Dining opportunities and or/retail
- Visitor Center



**AVERY AQUATICS CENTER, STANFORD UNIVERSITY**

PROMINENT NCAA-CALIBER RECREATION FOCUSED AREAS COMBINED WITH STUDENT SERVICES CAN SERVE AS MULTIPURPOSE PROGRAMMATIC AND PLACEMAKING ACTIVITY CENTERS.



ATHLETICS AND RECREATION CENTER  
UC DAVIS



RECREATION CENTER  
UC SANTA BARBARA



ATHLETICS AND RECREATION CORRIDOR  
ST. MARY'S COLLEGE



SCHAAL AQUATICS CENTER  
UC DAVIS



## MAXIMIZE EXISTING INVESTMENTS IN INFRASTRUCTURE

MAXIMIZE THE RETURNS ON INVESTMENTS THROUGH STRATEGIC DEPLOYMENT AND ATTENTION TO AESTHETICS

The existing infrastructure is generally in good condition. The campus is served by a robust, centralized chiller plant that uses thermal storage to provide campus cooling. The hierarchy of street systems will be an important underlying structure of the campus. It provides the pathways and connections for infrastructure, mobility, and access to campus services and support functions such as parking, deliveries, emergency access and the stormwater conveyance network and shapes building orientation.

The 2020 Project proposes an extension of Bellevue Road, eventually linking with Ranchers Road in the northeast. Major parking areas are may potentially to be accessed from this loop road. The corresponding streetscape can reinforce this hierarchy through complementary tree types, signage, surface treatments and street furnishings. Elements that highlight sustainability will be celebrated.

### 2020 INTEGRATION STRATEGIES

- Streets integrate stormwater management
- Rooftop solar collection on buildings
- Using life-cycle cost analysis
- Integration with Central Plant monitoring



### CAMPUS UTILITY TUNNEL

UC MERCED'S UTILITY TUNNEL BENEATH ANSEL ADAMS ROAD IS PURPOSEFULLY ALIGNED WITH THE STREET GRID TO REDUCE IMPLEMENTATION AND SERVICING COSTS. EXPANSION OF 2020 PROJECT INFRASTRUCTURE HAS THE OPPORTUNITY TO TAKE ADVANTAGE OF THIS PATTERN. BUILDING FUTURE UTILITIES AND TUNNELS ON DIAGONALS THROUGH THE MIDDLE OF BLOCKS OR UNDERNEATH BUILDINGS IS STRONGLY DISCOURAGED.

## 2020 OPPORTUNITIES

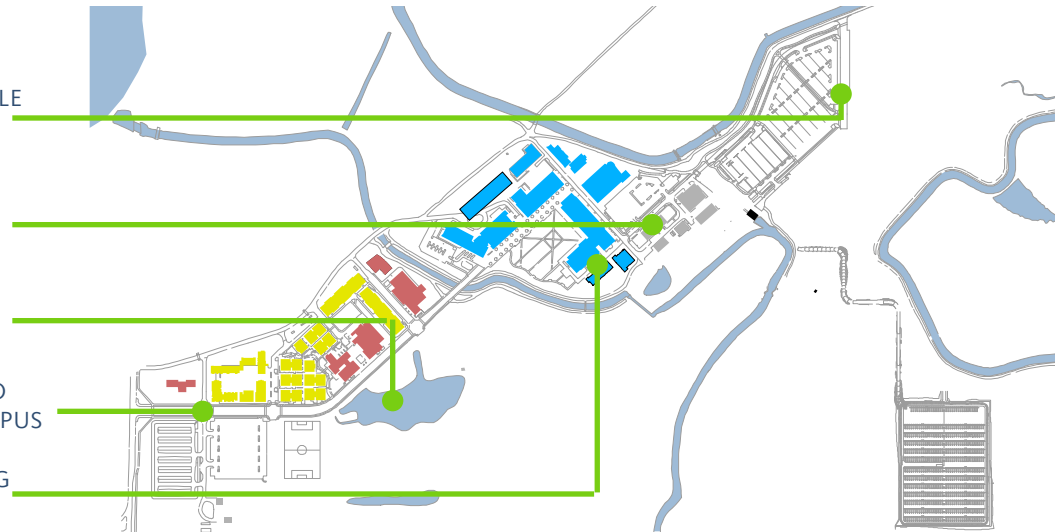
CAMPUS LOOP ROAD TO DEFINE A DISTINCT, PUBLICLY-ACCESSIBLE EDGE BETWEEN THE BUILT AND NATURAL ENVIRONMENT AND PROVIDE PERIMETER ACCESS TO THE CAMPUS

MAJOR SERVICE FACILITIES CAN BE LOCATED AT THE EDGES OF SITE FOR EASY ACCESS

CAMPUS STORMWATER RETENTION AND CONVEYANCE SYSTEMS RUNNING THROUGH THE SOUTH BOWL

CONNECT NORTH-SOUTH STREETS AND EAST-WEST GATEWAYS TO PROVIDE A PRIMARY INFRASTRUCTURE BACKBONE FOR THE CAMPUS

CONNECT AND INTEGRATE THE 2020 PROJECT WITH THE EXISTING CAMPUS



## BUILDING DESIGN

- Front buildings along major streets to reinforce the street pattern within districts and at connections to adjacent districts
- Align building facades with on north/south orientation to take advantage of passive solar energy during cold months and screen the sun during warm months
- Plan infrastructure related spaces for flexibility and expansion
- Design architecturally distinctive, utilitarian facilities for campus services and visible infrastructure

## PUBLIC REALM DESIGN

- Locate parking at the edge of districts or along secondary access routes to minimize pedestrian conflicts
- Establish a hierarchy of streets to minimize conflict between modes of access in each district
- Plan primary streets as multi-modal corridors to serve transit, bicycles, and pedestrians
- Locate major campus support services at the edges of districts or neighborhoods to provide ease of access to public utilities and services

## LANDSCAPE DESIGN

- Integrate stormwater retention and conveyance systems with streetscape, project siting, and open space area planning and design
- Develop streetscape landscape systems that shade pedestrian pathways, courtyards, and building facades in warmer months
- Locate utilities below low rooted plantings



## CIRCULATION CONCEPTS

The Long Range Development Plan includes a coordinated circulation overview and proposed multimodal street sections incorporating bicycles, pedestrians, transit and vehicles.

### DESIGN IMPLICATIONS

The goal of a pedestrian and bicycle oriented campus has design implications. For projects located along major pedestrian malls and arcades, transparent, activated ground floor uses and clear design-based wayfinding is critical.

For projects located adjacent to major bicycle circulation routes, the siting and orienting of bicycle storage must be convenient and secure.

For projects located along planned transit routes, flexibility must be embedded for the location of future transit stops and shelter.

### NEAR TERM OBJECTIVES

The campus objective in the near term is to create a formal primary entrance at the intersection of Lake Road and Bellevue Road, convert Scholars Lane to a formal bike, pedestrian, and transit mall and begin development of dedicated bike paths and the rehabilitation of Ranchers Road to true Caltrans standards.



### MULTIMODAL CIRCULATION NETWORK

THE 2020 PROJECT SHOULD SUPPORT THE LONG RANGE DEVELOPMENT PLAN GOAL OF EXPANDING AND ENHANCING A PEDESTRIAN-FIRST, TRANSIT-ORIENTED, MULTIMODAL CIRCULATION NETWORK

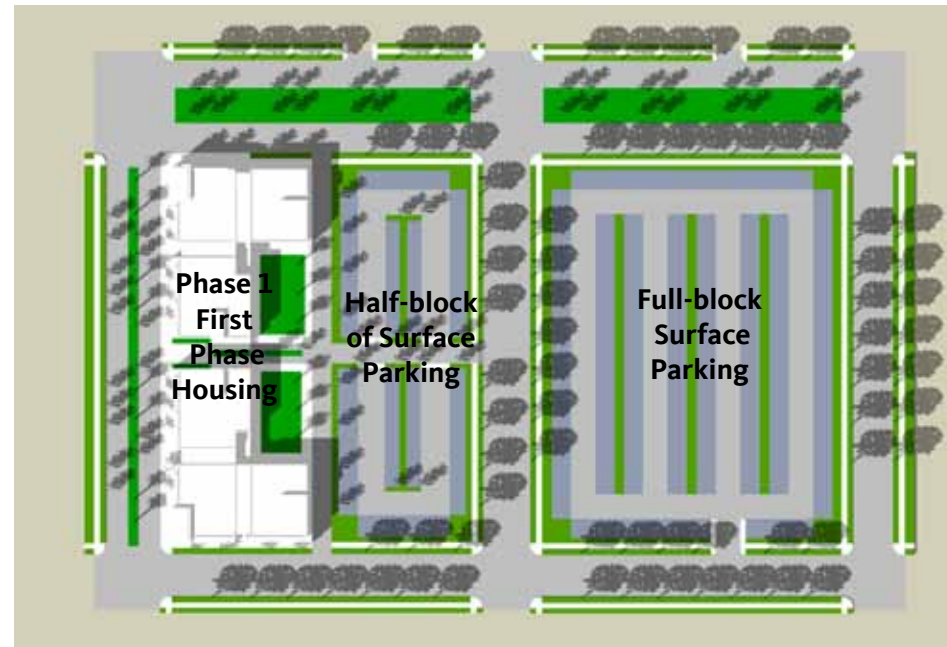
## PARKING

Most of the designated parking lots are suggested to be located along the east and south boundaries of the project area. There could be additional parking within mixed use Recreation/Athletic use and mixed-use residential use. UC Merced is currently conducting a Transportation Planning and Transit study to further inform the road and parking network.

Surface parking lots can be designed to lower construction costs through a combination of:

- Use of gravel and low cost paving
- Keeping infrastructure and utilities at the edge of the block
- Utilizing passive stormwater management
- Best Management Practices

### POTENTIAL SURFACE PARKING PHASING STRATEGY ADJACENT TO BUILDINGS



**SOLAR PARKING SHADES**  
VISIBLE EXAMPLE OF SUSTAINABILITY  
AND SHADE CREATION



**PERMEABLE SURFACES**  
GROUNDWATER RECHARGE AND PARKING IN  
AREAS WHERE SOIL CONDITIONS PERMIT



**BIOSWALES**  
POTENTIAL FOR INTERCONNECTION TO  
STORMWATER MANAGEMENT SYSTEM



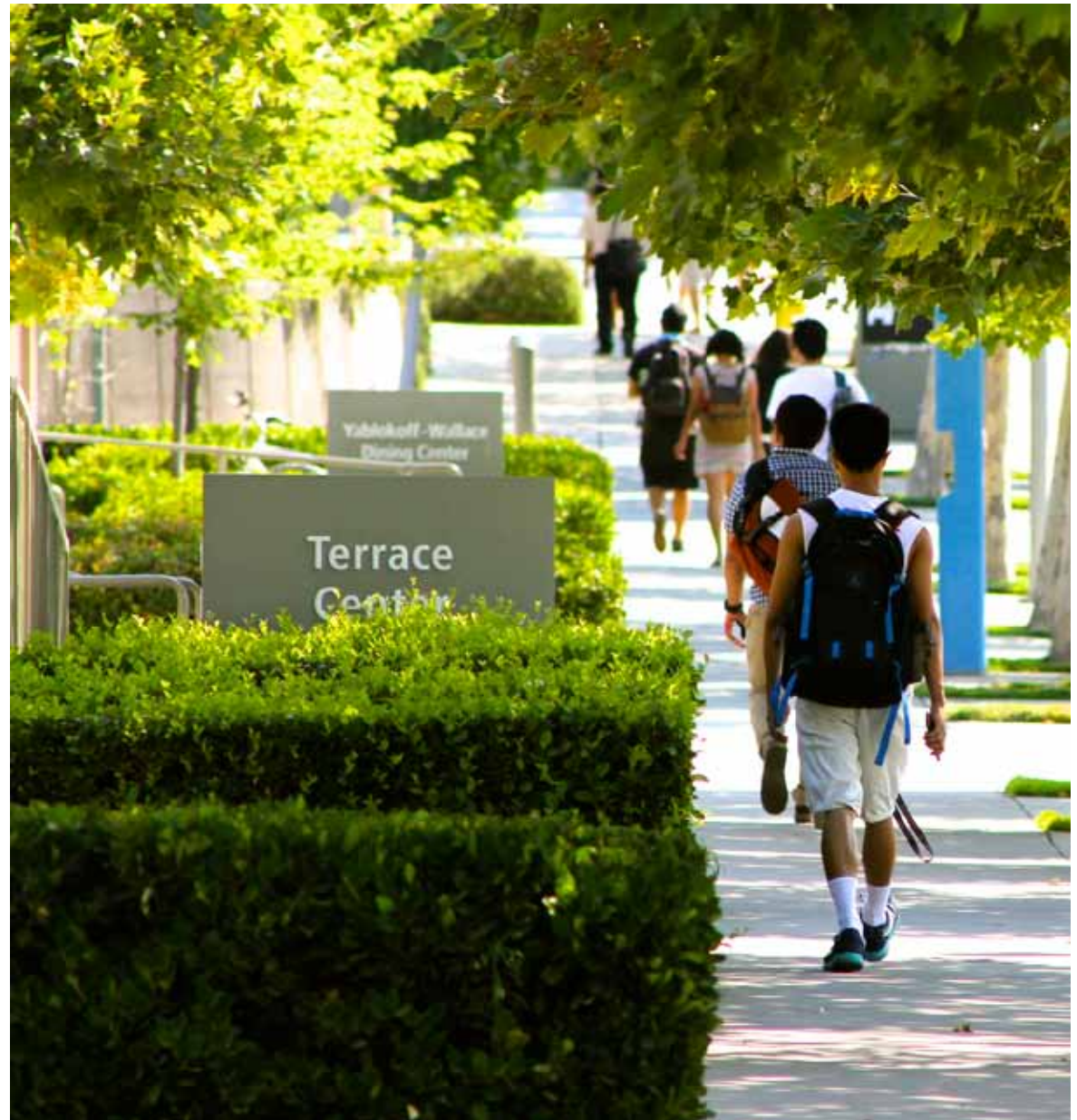
## OPPORTUNITIES FOR CONNECTION TO THE EXISTING CAMPUS

The street network is a primary organizational element at UC Merced. The urban streetscape pattern focuses activities and interaction and is the primary method of pedestrian, vehicular, and transit circulation.

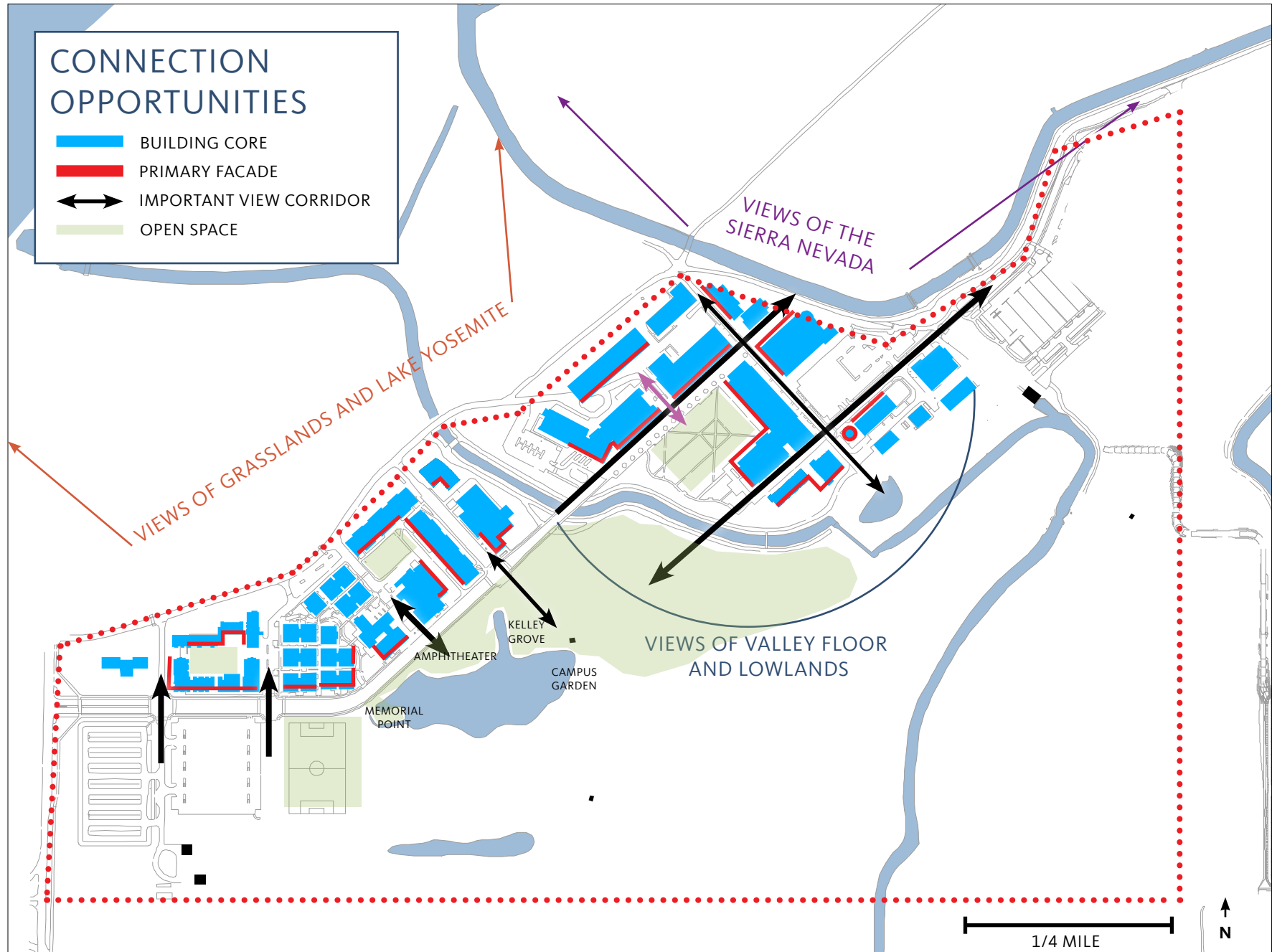
The campus is based on an approximately 300 by 300 foot block based urban grid. The purpose of the grid is to provide flexibility for phasing future projects and facilitate cost effective infrastructure deployment at future stages of campus development.

As the campus grows, connection opportunities can be made by applying compatible streetscape dimensions and taking advantage of front door image opportunities. Attention to placemaking and view corridors will be essential to reflecting the urban approach of cultivating improved pedestrian experiences and interaction among students, faculty and staff.

The connection opportunities diagram reveals important information about build-to dimensions, UC Merced's approach to primary building facades and entrances, views, terminating vistas, and accommodating service functions.



SCHOLARS LANE





## ELEMENTS TO CARRY FORWARD



WIDE SHADED ARCADES FOR CIRCULATION AND GATHERING



LANDSCAPE ELEMENTS



VISIBLE INFRASTRUCTURE



ACTIVE GROUND FLOOR PROGRAMMING



PLACEMAKING



GATHERING SPACES



CLIMATE CONSIDERATIONS



URBAN STREETWALL ALIGNMENTS



ICONIC ELEMENT



SEASONAL COLOR: SPRING



OUTDOOR SPACES THAT CAN ACCOMMODATE INFORMAL EVENTS



SEASONAL COLOR: FALL







# BUILDING DESIGN PRINCIPLES







Each new project at UC Merced should fulfill its role by defining public space and engaging other buildings to generate a collective context of placemaking.

The principles are consistent with the Long Range Development Plan and illustrate the programmatic intentions of future development. They also integrate planning, public realm, and landscape principles in this document.

The principles are articulated through the “Design Strategies” that provide the intent of the goals.



## BUILDING DESIGN PRINCIPLE 1

# A Distinctive Urban Environment

The Long Range Development Plan prescribes building setbacks and heights and encourages building forms that shape the street and engage the public realm with entry porches, arcades and common spaces at the ground level. It is the well-balanced variety of building massing and textures of shadow, light, and materials that adds to the richness of the campus' built urban environment.

In the usual development context, the building setback line determines the location of the building with respect to the block edge. The careful siting and placement of buildings on the block edge creates a definitive edge and reinforces the pedestrian experience by shaping and activating public spaces.

Like a vibrant pedestrian urban core, UC Merced setbacks support the circulation system and the pedestrian experience.

## GOAL

CREATE A DISTINCTIVE URBAN ENVIRONMENT BY USING BUILDING FORM TO DEFINE THE PUBLIC REALM AND ESTABLISH A HUMAN SCALE ON CAMPUS.



## DESIGN STRATEGIES

### 1.1

Incorporate building edges that provide a visually interesting experience to pedestrians.



SOCIAL SCIENCES AND MANAGEMENT

### 1.2

Vertically zone building programs to integrate functions that engage the largest number of people directly accessible at the ground floor.



CLASSROOM BUILDING LECTURE HALL  
GROUND FLOOR

### 1.3

Orient buildings to promote pedestrian activity, and use street wall massing, articulation, detail and quality materials to highlight a pedestrian scaled experience along each street front.



THE SUMMITS MID-BLOCK PASSTHROUGH



## BUILDING DESIGN PRINCIPLE 2

# A Frame of Reference

The sensory experiences of destinations, visual connections, and sense of entry and departure on campus serve the purpose to locate campus users in the environment and mark their experience with heightened meaning and importance of place. The location of one's precise physical position on the campus through the use of identifiable landmarks is helpful in navigating around campus.

The principles in this section include incorporating a high degree of visual connectivity in building projects, developing active street edges and using corners as placemaking elements to accentuate their location. This creates opportunities for allowing a variety of conditions for a unique environment that helps to humanize the scale of the campus into discernible segments.

## GOAL

MAINTAIN A VISUAL CONNECTION AND FRAME OF REFERENCE ON CAMPUS THAT PROVIDES A SENSE OF LOCATION BY USING URBAN DESIGN ELEMENTS TO DELINEATE NAVIGATION POINTS.



LANTERN ON SCIENCE AND ENGINEERING 1

## DESIGN STRATEGIES

### 2.1

Enhance the sense of arrival at key entry points to the campus through the use of design elements that include light and permanence.



LAKE ROAD

### 2.2

Maximize the use of views by careful siting and massing, and by aligning the building footprint and orienting outdoor spaces towards view corridors.



HALF DOME RESIDENCES

### 2.3

Orient stairs, hallways and building breezeways to views of the outdoors and distant open space.



SOCIAL SCIENCES AND MANAGEMENT



## BUILDING DESIGN PRINCIPLE 3

# A Place to Experience

“Places” are where the meaningful events of campus life are experienced at UC Merced. The 2009 LRDP introduced the idea that campus projects should deliberately contribute to the development of “memorable places” to foster scholarly and social relationships, deepen a sense of community, and lead to interdisciplinary discovery of new ideas or ways of learning.

Places include central places, linear places, and open spaces. A central place encourages social interaction and is a ‘place of action’ for particular campus activities. A linear place acts as connective tissue and provides a comfortable, social connection between activity centers. Open spaces are outdoor gathering spaces that connect buildings to the outdoors and support ceremonies and events.

Places create the hubs of an activity area that provide the social and programmatic nucleus for campus districts and neighborhoods. These areas encourage personal conversations and social interaction among students, faculty and staff.

This type of personal experience provides opportunities to interact, evokes positive human emotions, and provides a level of personal comfort and well-being. This physical environment helps build long lasting relationships.

## GOAL

ESTABLISH MEMORABLE OUTDOOR PLACES TO CREATE A PLACE TO EXPERIENCE MEANINGFUL CAMPUS LIFE.



## DESIGN STRATEGIES

### 3.1

Create linear places for social interaction along primary pedestrian pathways.



SCIENCE AND ENGINEERING 1

### 3.2

Create outdoor spaces for students, staff and visitors to interact, hold informal meetings or eat lunch.



QUADRANGLE

### 3.3

Use building form to define outdoor gathering spaces that are protected from wind, provide shade when desirable and are oriented toward the sun.



SCIENCE AND ENGINEERING 1



## BUILDING DESIGN PRINCIPLE 4

# A High Quality Public Realm

A high quality public realm is essential to developing a thriving, vibrant, sustainable and attractive campus community that everyone can enjoy and take pride in.

The term of figure/ground is used to describe the spaces around and between buildings, such as streets, courtyards, and open space areas. New development contributes to the incremental formation of figure/ground space that helps define the public realm. These spaces contribute to an urban landscape that creates the social and aesthetic fabric of the campus. Urban form and the strategic siting of buildings shape and define the public realm.

The open spaces at UC Merced define the character and quality of personal experiences with the physical environment of the campus. Open space ranges from small intimate areas for studying or socializing with friends to large gathering spaces for public events. These areas often start as streets or pedestrian sidewalks that provide access into academic and residential buildings. Open space is intended to operate as a system, each flowing into the next space. They are to be designed to relate to the activities located within the building and the surrounding area.

## GOAL

INCORPORATE BUILDING FORMS THAT SHAPE PUBLIC SPACE, AS IT IS THE SPACE BETWEEN THE BUILDINGS THAT DEFINES THE HIGH QUALITY OF THE PUBLIC REALM AND COHERANCE OF THE URBAN FABRIC.



## DESIGN STRATEGIES

### 4.1

Design buildings as “form makers” to define the public realm and create outdoor spaces, plazas, and other community gathering places.



QUAD

### 4.2

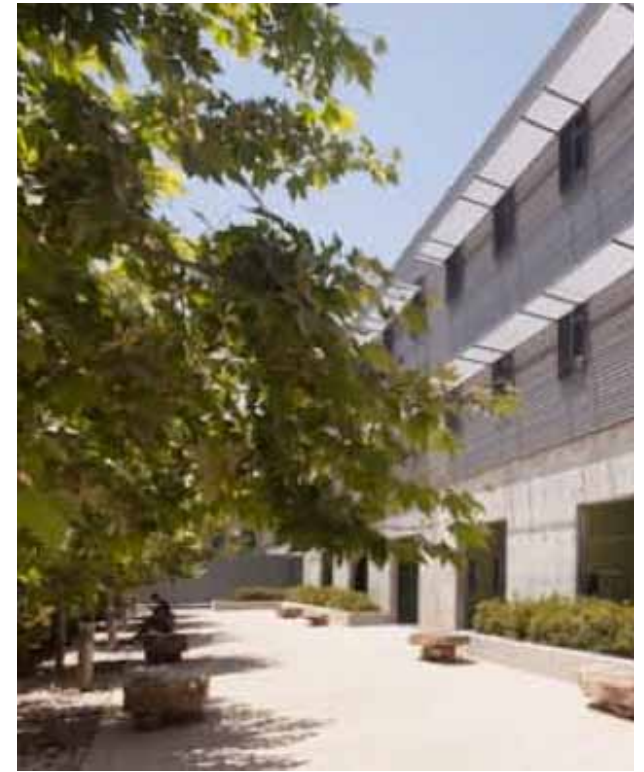
Create an aesthetically pleasing, comfortable, and inviting pedestrian environment framed by buildings and landscaping.



SCHOLARS LANE/  
KOLLIGIAN LIBRARY

### 4.3

Support the incremental development of public space through the investment of open space, new buildings, and landscape within pedestrian districts and neighborhoods.



COURTYARD



## BUILDING DESIGN PRINCIPLE 5

# A Unique Architectural Identity

A very distinctive architectural vision has been established at UC Merced. It is expected that new buildings shall make their contributions to this environment by building upon the existing architectural context. However, it is envisioned that the architectural design of new buildings will evolve over time.

Typically, buildings are seen as contextual solutions when they appear similar to other buildings in their surroundings. This does not mean that buildings should just reinterpret the stylistic features of existing buildings. To create architectural diversity, the building design needs to incorporate visual variety and complexity. The architectural expression should reflect its context and program.

Once a building's massing and street wall elevation have been defined, the details, including façade variation, materials and window and door fenestration, help shape a building's architectural identity. The interplay of materials, windows and other elements should support the larger design objectives as articulated by the architect. The building materials used on the campus should be appropriate for the vision of a modern, sustainable 21st century campus located in the Central Valley. Create buildings in conversation with one another by designing with a common language yet creating new dialects.

## GOAL

ENHANCE THE ARCHITECTURAL IDENTITY ON CAMPUS BY INCORPORATING DESIGN PRINCIPLES INTO THE BUILDING DESIGN THAT INCLUDE A FOCUS ON FORM, FUNCTION, STRUCTURAL EXPRESSION, MATERIALS AND DETAILS.



## DESIGN STRATEGIES

### 5.1

Incorporate human-scale references in building forms through expression of balconies, overhangs, roof terraces, handrails and other design features that engage people at the human scale.



KOLLIGIAN LIBRARY

### 5.2

Detail the building with rigor and clarity to reinforce the design intentions and to help set a standard of quality to guide the built result.



SCIENCE AND ENGINEERING 1

### 5.3

Use especially durable materials on ground floor facades to reinforce a sense of quality and permanence.



SOCIAL SCIENCES AND MANAGEMENT



## BUILDING DESIGN PRINCIPLE 6

# A Symbolic Presence

UC Merced has been intentionally designed to support the creation and dissemination of knowledge. While the campus incorporates the functional requirements of a major research university, it also contributes to the symbolic image of a 21st century university. The underlying mission, vision, and values of the University are represented by the motto '*Fiat Lux*' - Let There Be Light. The University provides individuals with a path that leads to intellectual enlightenment and discovery. This environment supports student and staff creativity, innovation, and productivity.

Campus architecture supports this concept by creating a physical environment that provides a thought provoking atmosphere and fosters interaction between students and faculty. The architectural concept being conveyed is that of "a living laboratory" where major academic functions are designed to be transparent and can be observed. For example, the Central Plant provides several viewing areas into the facility that allow the observer to see how the building functions and operates. This concept is articulated on various buildings throughout the UC Merced campus.

The campus provides different scales of interaction that provide an environment of engagement and interaction. The design of the campus fosters a sense of community through facilitation and collaboration and supports an interconnected community of faculty and students.

## GOAL

CREATE AN ACADEMIC ENVIRONMENT THAT SUPPORTS CREATIVITY, INNOVATION, AND PRODUCTIVITY BY USING SYMBOLIC ARCHITECTURAL IMAGERY TO DYNAMICALLY CONNECT PEOPLE, PLACES, AND OPEN SPACES.



## DESIGN STRATEGIES

### 6.1

Design buildings to be a “living laboratory” to convey the core values of the campus’ academic mission.



CENTRAL PLANT CHILLER ROOM WINDOW

### 6.2

Incorporate architectural elements that define an academic environment where activities take place 24 hours a day and seven days a week.



ANSEL ADAMS ROAD

### 6.3

Provide exterior space to support social interaction.



SOUTH BOWL



## BUILDING DESIGN PRINCIPLE 7

# A Well Defined Skyline

The campus skyline is composed of a collection of individual buildings that define an urban environment. Buildings, massing and roof forms should be designed to be appreciated and recognizable when viewed as part of the distant skyline, from above or at the most intimate level by the pedestrian.

The building form should be sensitive to the natural environment of the site, including topography, landscape, sky and distant views of the Sierra Nevada. The roof and horizontal plane of a building should be used to clarify the building's uses and visually differentiate ground floor uses from core functions and to define how the building 'meets the sky.'

## GOAL

DEVELOP A COHESIVE, DISTINCTIVE, AND HARMONIOUS CAMPUS SKYLINE BY INTEGRATING THE BUILDING ROOFLINE AS THE "FIFTH FACADE".



## DESIGN STRATEGIES

### 7.1

Strategically plan the building as part of the campus skyline with an emphasis on the horizontal nature of the earth and sky relationship.



VIEW OF CAMPUS FROM LAKE ROAD

### 7.2

Integrate building massing and siting with the natural setting and topography, landscape, sky and distant views of the Sierra Nevada.



SIERRA NEVADA FROM LITTLE LAKE

### 7.3

Design the roof as an element integral to the architectural massing of the building for the integrity of campus skyline.



STUDENT ACTIVITIES AND ATHLETICS CENTER



## BUILDING DESIGN PRINCIPLE 8

# A Sense of Place

Places that are evocative, from the natural environment to significant human constructs, embrace us and give a sense of belonging.

The architectural dialect of the campus reinforces the concept of 'Genius Loci', or spirit of place, in that it embraces an aesthetic inspired by the utilitarian agricultural and industrial structures of California's Central Valley region.

Building form and function is expressed through architectural form and building materials that are durable, sustainable and adaptable to the Central Valley's climate. Buildings are designed to be compatible with the surrounding environment.

The design of buildings is similar to that of agricultural and industrial complexes in that buildings are added over the course of time and demonstrate a common theme that unifies their design. This approach to design combines the Central Valley heritage with a 21st century ambition to create a campus which is of the Valley, while upending traditional notions of what a campus should look like. This is intended to provide continuity and contribute to a coherent fabric over the course of time.

## GOAL

FOSTER A SENSE OF PLACE ON CAMPUS BY IMPLEMENTING A CONTEXTUAL DESIGN APPROACH TO BUILDING DESIGN.



GRAIN SILO

## DESIGN STRATEGIES

### 8.1

Incorporate design cues from the Central Valley's agricultural and industrial buildings to include the honest expression of building structure and materials.



CENTRAL PLANT

### 8.2

Organize the exterior building skin to bear a direct relationship to the building's structural elements that reinforce the concept that form follows function.



SCIENCE AND ENGINEERING 1

### 8.3

Communicate the expression of a building function (e.g. stairways), where the interior function meets the exterior envelope in order to provide articulation on the exterior facade.



SOCIAL SCIENCES AND MANAGEMENT



## BUILDING DESIGN PRINCIPLE 9

# A Timeless Quality

The design of the urban fabric of the campus is to remain not only visually coherent, but also conceptually articulate in its development over time.

A coherent architectural context is a necessary condition for a unique architectural expression. New buildings being designed for the campus should utilize existing architectural character found on campus.

In addition, new buildings on campus need to be site specific and preserve and enhance the scale and character of the campus by providing appropriate transitions and buffering. Projects that embody this principle will make a distinctive contribution to the architectural fabric of the campus.

Buildings shall aim for a “timeless design” and employ sustainable materials and careful detailing that have proven longevity.

## GOAL

CONTRIBUTE TO ARCHITECTURAL CONTINUITY BY INCORPORATING DESIGN PRINCIPLES THAT ARE CONSISTENT OVER TIME.



## DESIGN STRATEGIES

### 9.1

Respect and accentuate the surrounding campus context, academic district and residential neighborhood.



PASSAGEWAY

### 9.2

Preserve and enhance the scale and character of existing districts and residential neighborhoods by providing appropriate transitions and buffering.



JOSEPH S. GALLO RECREATION CENTER

### 9.3

Utilize existing architectural elements and materials found on campus to create a consistent and cohesive campus fabric.



SOCIAL SCIENCES AND MANAGEMENT



## BUILDING DESIGN PRINCIPLE 10

# A Sustainable Place

Buildings consume a major amount of global resources. The goal of a sustainable building is to reduce the overall impact of a building on human health and the natural environment.

UC Merced has adopted a Triple Zero Commitment to be zero net energy, produce zero landfill waste and produce zero greenhouse gas emissions.

This commitment relies on an effort to maximize energy efficiency, implemented through a program that sets energy performance targets for new building designs. The overall goal of the program is to design buildings that consume half the energy and peak demand of other university buildings in California.

From passive design strategies such as arcades and solar shading to intelligent HVAC systems, design strategies that move the campus towards that goal are instrumental.

Typically, campus buildings function for seven to ten decades after their original construction, and the interiors are remodeled three to four times. The opportunity for UC Merced is to design, operate and maintain leading edge facilities that efficiently use energy, water, and other resources, protect occupant health and improve productivity and learning environments.

## GOAL

BUILD ON THE LEGACY OF SUSTAINABLE PLACEMAKING TO DATE.



## DESIGN STRATEGIES

### 10.1

Use the sun to make smart decisions about building orientation, shading, envelope materials and cooling systems.



PASSAGEWAY

### 10.2

Use whole building energy benchmarks throughout the design process to lower life-cycle costs and develop choices and alternatives.



SCIENCE AND ENGINEERING 1 OVERHANG,  
SUN SHADES AND HEAVY MASS WALLS

### 10.3

Build for resiliency, flexibility and occupant satisfaction over multiple decades of use.



READING ROOM DAYLIGHTING





# **PUBLIC REALM PRINCIPLES**







The public realm principles influence the social, recreational, cultural, economic, aesthetic and programmatic parameters of UC Merced's built environment.

Integration of these principles will create an interactive campus that fosters development of scholarly and social relationships and a deeper sense of community and lead to interdisciplinary discovery of new ideas or ways of learning.

## PUBLIC REALM PRINCIPLE 1

# PROGRAM BUILDINGS TO FOSTER INTERACTION AND ENGAGEMENT OF THE CAMPUS COMMUNITY

- Vertically zone building programs so that functions engaging the largest number of people are directly accessible at the ground floor
- Locate large classrooms, lecture halls, and studios at the ground floor, while locating more isolated functions, such as research and administration, at upper levels
- Locate programs with high levels of activity near major points of connection between districts, or at the heart of a district or neighborhood
- Locate student services, recreation, and commercial activities in prominent locations at the ground level of buildings along major pathways

## SCIENCE AND ENGINEERING 2

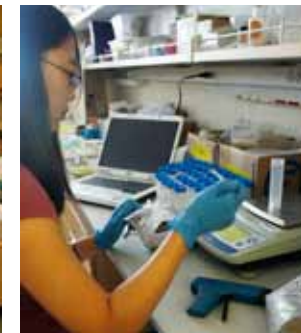
ILLUSTRATIVE CONCEPT, VERTICAL ZONING TO PROMOTE GROUND FLOOR ACTIVITY



STUDENT SERVICES  
AND COMMERCIAL  
ACTIVITY ON  
GROUND FLOOR

LARGE LECTURE HALLS  
ON GROUND FLOORS

FACULTY OFFICES,  
RESEARCH OR  
ADMINISTRATION ON  
UPPER FLOORS





## PUBLIC REALM PRINCIPLE 2

### DESIGN PLACES WITHIN THE CAMPUS TO CREATE ACTIVITY NODES OR POINTS OF CONNECTION FOR PEOPLE TO INTERACT

- Create mixed-use centers of activity within each district or neighborhood
- Create accessible, linear places for interaction along specific corridors in each district or neighborhood
- Create multiple outdoor venues for casual and programmed recreational and social activities and events throughout the campus



MULTIPLE LAND USES WITH HIGHER DENSITIES AT THE HEART OF STUDENT NEIGHBORHOODS EXPRESS THE GOAL OF GENERATING ACTIVITY



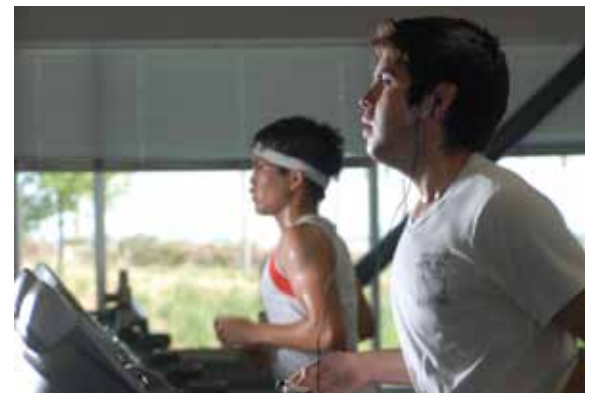
OUTDOOR OPEN SPACE FOR GATHERING



DINING FACILITY SEATING EXTENDS BUILDING TO THE STREET



LANTERN CAFE  
INTERNAL AREAS FOR SOCIAL INTERACTION



RECREATION FACILITIES ACT AS CENTRAL POINTS OF COMMUNITY ACTIVITY

### PUBLIC REALM PRINCIPLE 3

## DESIGN PATHWAYS TO DYNAMICALLY CONNECT PEOPLE, PLACES AND PROGRAMS

- Create and support a legible hierarchy of streets, block patterns and view corridors accessible to all users
- Connect campus programs, places and open spaces
- Reinforce social, cultural and economic links with the adjacent community
- Ensure paths are attractively well-lit and provide broad ADA accessibility

PROJECTS ALONG CIRCULATION CORRIDORS HAVE AN OPPORTUNITY TO CREATE “PLACES” THAT FOSTER ACTIVITY





## PUBLIC REALM PRINCIPLE 4

# INTEGRATE AESTHETIC AND FUNCTIONAL DESIGNS INTO SYSTEMS FOR MOVEMENT, SERVICE AND ACCESS

- Connect users of all physical abilities to their surroundings by incorporating attractive features into mobility related projects
- Integrate stormwater management systems into site and street design and open space and recreation area planning
- Incorporate utility connections and corridors into pathways, bikeways, bridge designs and canal easements
- Design campus infrastructure projects as integral elements of the landscape or building designs or as aesthetically distinctive objects



**VISIBLE, WELL LOCATED BICYCLE STORAGE**  
AN EXAMPLE OF HOW FUNCTION CAN SUPPORT A PRIMARY MOBILITY SYSTEM



MONTREAL, CANADA



GLORIETA DEL DEPORTISTA SERGIO CARDELL  
ALICANTE, SPAIN

## PLACEMAKING BY TRANSIT

THIS TRANSIT STOP INCORPORATED INTO A ROUNDABOUT DOUBLES AS PUBLIC SPACE



TE REWA REWA  
PEDESTRIAN BRIDGE  
NEW PLYMOUTH, NEW ZEALAND

## BRIDGES AS ICONS

BRIDGES CROSSING THE SITE'S CANALS SHOULD BE DESTINATIONS THAT CELEBRATE THEIR PRESENCE



## CREATIVE CROSSING

FUNCTIONAL ELEMENTS OF THE PEDESTRIAN EXPERIENCE CAN BE CREATIVE AND INSPIRING







A close-up photograph of a cherry blossom branch. The branch enters from the left, showing clusters of white flowers in full bloom and several unopened buds. The background consists of a white fence with vertical slats and a clear blue sky. The text 'LANDSCAPE PLANNING PRINCIPLES' is overlaid in white, bold, sans-serif capital letters on the right side of the image.

# LANDSCAPE PLANNING PRINCIPLES

## LANDSCAPE DESIGN PRINCIPLE 1

# A Regionally Contextual Landscape

UC Merced will always be visually connected to a unique, natural landscape. The site is characterized by seasonal grasslands - rich in green grasses and wildflowers in the wet seasons and drying to very pale beige in the hot summer. While irrigation provides the opportunity for the developed campus to be green and oasis-like even in summer, concerns about resources and water use require that the intent, design and maintenance of the landscape support campus goals of sustainability and a model for growth.

Stylistically, the goal is to achieve a context inspired by California's Central Valley. Through plant selection, arrangement and design, the aim is to pull from existing and established patterns of vegetation, whether they be natural, cultural or human-made.

## GOAL

A LANDSCAPE THAT EMBRACES UC MERCED'S PLACE, TIME AND LONG TERM VISION.





## DESIGN STRATEGIES

### 1.1

Reflect the spirit of the Valley by incorporating species and features that echo Valley rivers, grasslands, and cultural history.



VALLEY OAK TREE

### 1.2

Use local, seasonal, agricultural and regional influences as reference points.



ALMOND ORCHARD

### 1.3

Reflect UC Merced's sustainability aspirations by capturing long term savings of resources by using a water efficient landscape.



CAMPUS BIOSWALE

## LANDSCAPE DESIGN PRINCIPLE 2

# A Connected Campus Landscape

The design of UC Merced's landscape and the character of the campus go beyond simple interest in urban form. Landscaping is UC Merced's connective element, with far-reaching benefits to the community, its identity and to the natural environment.

A thoughtful approach to the campus landscape will provide opportunities to create memorable places for collaborative, interdisciplinary interactions.

## GOAL

A LANDSCAPE THAT FOSTERS EMOTIONAL CONNECTIONS AND COMMUNITY OWNERSHIP OF UC MERCED'S OUTDOOR ENVIRONMENT.



## DESIGN STRATEGIES

### 2.1

Create memorable outdoor places and views that promote collaborative interactions and foster enjoyment for UC Merced's unique setting.



SOUTH BOWL

### 2.2

Create places and walking, recreation and meeting paths designed for conversation and people watching.



LE GRAND CANAL PATH

### 2.3

Where possible, use a landscape theme and vernacular materials to create continuity through different buildings and blocks.



ANSEL ADAMS ROAD



### LANDSCAPE DESIGN PRINCIPLE 3

# Create a Teaching Landscape

In the same way UC Merced's Central Plant sets the tone for architecture as a living laboratory, UC Merced's landscape choices should demonstrate pedagogical opportunities through implementation of performance strategies, efficiency and best practices.

With these teaching places, the campus will have truly extended its teaching, research and public service mission beyond the walls of its buildings.

### GOAL

A LANDSCAPE THAT EXTENDS THE TEACHING, RESEARCH AND PUBLIC SERVICE MISSION OF THE CAMPUS TO THE OUTDOORS.



## DESIGN STRATEGIES

### 3.1

Use landscape as a teaching tool for model landscaping alternatives.



SOCIAL SCIENCES AND MANAGEMENT

### 3.2

Create places that promote immersion in the landscape through teaching, learning, working and mental health.



CAMPUS FOOD GARDEN, SOUTH BOWL

### 3.3

Embrace opportunities for the development of soil, water and plant institutional knowledge.



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#### LANDSCAPE DESIGN PRINCIPLE 4

# Create Signature Places

The single most dominating natural landscape feature of the campus is the surrounding foothill grassland that frames the northern and eastern borders of the site and the distant views towards the Sierra Nevada.

Interconnecting the vital urban character of the campus with the experience of this expansive natural beauty into the built environment can be accomplished by creating signature places for rest and recreation defined by a network of shaded places clearly designed for activity.

#### GOAL

A LANDSCAPE THAT CREATES PLACES WITH A DISTINCT IDENTITY AND CHARACTER.





## DESIGN STRATEGIES

### 4.1

Create a range of plazas, courtyards, and secondary open spaces featuring distinctive landscape elements, shade, art and climate appropriate seating arrangements.



BROWNS BAY, NORTH SHORE AT NIGHT  
AUCKLAND, NEW ZEALAND

### 4.2

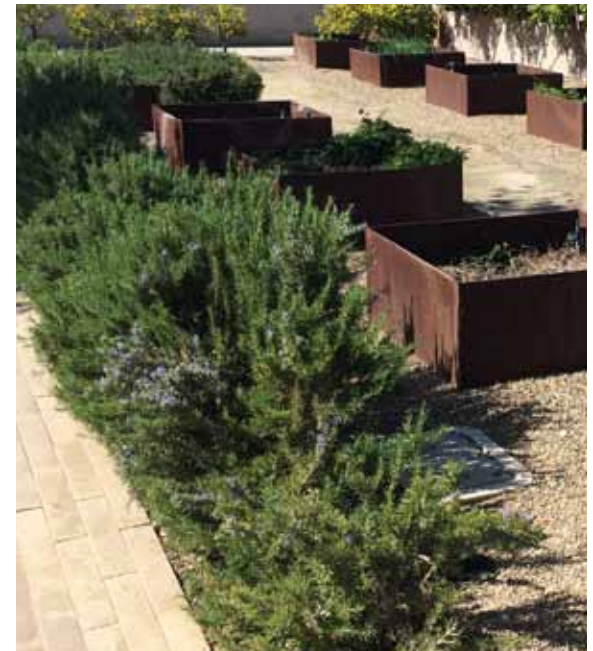
Use landscape to create places, neighborhood, district and campus scale in order to enable people and programs to come together to enrich campus life.



QUADRANGLE

### 4.3

Use the landscape of smaller, more intimate spaces as an opportunity for specialized plantings or signature approaches to design.



PRIVATE DINING PATIO, UC MERCED DINING

## LANDSCAPE DESIGN PRINCIPLE 5

# Create a Sustainable Landscape

Landscaping is the overwhelming consumer of campus water. The challenge and opportunity for UC Merced is demonstrate how a campus can grow without overconsuming this precious resource.

Through careful plant selection, irrigation approaches and maintenance, the long term savings of energy and water will reflect the efficiencies of both the landscape and built environment alike. The hope is that as UC Merced's landscape matures, fewer resources will be required to sustain this critical element of the UC Merced experience.

## GOAL

A LANDSCAPE THAT DEMONSTRATES UC MERCED'S LEADERSHIP IN SUSTAINABILITY.



## DESIGN STRATEGIES

### 5.1

Use drought tolerant, noninvasive plants.



RECREATION CENTER COURTYARD

### 5.2

Use lawns and turf for programmatic purposes rather than as a default ground cover.



QUADRANGLE

### 5.3

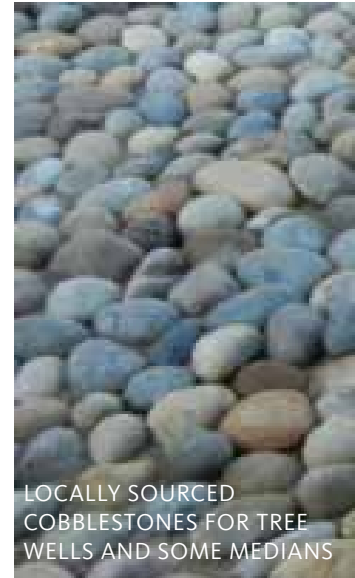
Make intentional decisions to promote biodiversity, wildlife and fragrance.



VALLEY TERRACES



## EXISTING LANDSCAPE PRECEDENTS





THE 12-FOOT WIDE LE GRAND CANAL PEDESTRIAN/BICYCLE PATH FOLLOWS THE CURVATURE OF FAIRFIELD CANAL



MEMORIAL POINT AT LITTLE LAKE WITH VALLEY OAK TREE



SCHOLARS LANE VALLEY OAK TREE







# APPENDIX



## COLOR PALLETTE

### ACADEMIC CORE

The Academic Core features concrete, glass and steel forms. Warm earth tone colors derived from the local landscape have been used as accent features.

### RESIDENTIAL NEIGHBORHOODS

Greater flexibility is warranted in residential neighborhoods with regards to dominant color choices. The overall impact is an aesthetically appealing range of vibrant earth tones that blend into and remain attractive within the natural environment and agriculturally-influenced environment.



**WINTER IN THE SAN JOAQUIN VALLEY**  
RAINY WINTERS IN THE VALLEY ARE MARKED BY DORMANT ORCHARDS, GREEN GRASSES AND WET SOIL



**SPRING IN THE SAN JOAQUIN VALLEY**  
IN SPRING, FRUIT BLOSSOMS, WILDFLOWERS AND CLEAR SKIES TRANSFORM THE VALLEY INTO A VIBRANT, COLORFUL PLACE

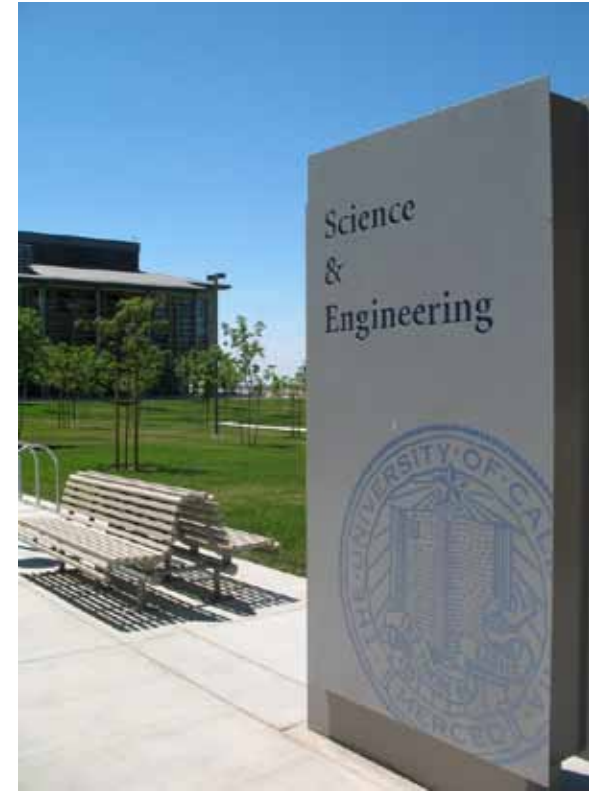


**THE ACADEMIC CORE**  
EXEMPLIFICATION OF THE USE OF CONCRETE, GLASS AND METAL



**SOCIAL SCIENCES AND MANAGEMENT**  
AN EXAMPLE OF ACCENT COLORS IN ACADEMIC CORE





COLORS  
EARTH TONES MIXED WITH GLASS AND STEEL



## ON-CAMPUS BUILDINGS

PROJECT	SIZE	DESIGN	OPENING DATE	LEED-NC STATUS	ENERGY USE DESIGN TARGET	USE
Leo and Dottie Kolligian Library	178,818 GSF	Architect: Skidmore, Owings & Merrill Landscape: Peter Walker Partners	August 2005	Gold LEED-NC v.2.0	80% of Benchmark	Academic
Central Plant	29,000 GSF	Architect: Skidmore, Owings & Merrill with ARUP Landscape: Peter Walker Partners	August 2005	Gold LEED-NC v.2.0	80% of Benchmark	Services
Valley Terraces	149,170 GSF	Architect: The Taylor Group Landscape: KTUA Landscape Architecture/Planning	August 2005	Silver LEED-NC v.2.1	80% of Benchmark	Residential
Classroom Office Building	92,601 GSF	Architect: Thomas Hacker Architects Landscape: Peter Walker Partners	January 2006	Gold LEED-NC v.2.0	80% of Benchmark	Academic
Science and Engineering 1	174,105 GSF	Architect: EHDD Landscape: Peter Walker Partners	February 2006	Gold LEED-NC v.2.0	80% of Benchmark	Academic
Sierra Terraces	84,464 GSF	Architect: Fisher Friedman Landscape: OMG Landscape Architecture	August 2007	Gold LEED-NC v.2.0/2.1	80% of Benchmark	Residential
Joseph S. Gallo Recreation and Wellness Center	35,400 GSF	Architect and Landscape: Sasaki Associates	August 2006	Gold LEED-NC v.2.1	65% of Benchmark	Student Services
Dining Expansion	8,500 GSF	Architect: EHDD Landscape: Stephen Wheeler Landscape Architects	August 2008	Platinum LEED-NC v.2.2	65% of Benchmark	Student Services
Early Childhood Education Center	6,113 GSF	Architect: Indigo Architects Landscape: Perkins Design Associates	June 2009	Gold LEED-NC v.2.2	65% of Benchmark	Student Services
The Summits: Cathedral and Tenaya Halls (Housing 3)	90,000 GSF	Architect: Pyatok Architects Landscape: PGA Design	Fall 2010	Gold (target) LEED NC- v.2.2	65% of Benchmark	Residential
Facilities A and B	30,294 GSF	Architect: Studios Architecture	December 2008	Gold LEED NC- v.2.2	65% of Benchmark	Services
Social Sciences and Management	101,500 GSF	Architect: Studios Architecture Landscape: Perkins Design Associates; Integrated Design Studio	August 2011	Platinum LEED NC- v.2.2	65% of Benchmark	Academic
Student Activities and Athletics Center	19,000 GSF	Architect: McCarthy/WRNS Studio Landscape: Cliff Lowe Associates	Fall 2012	Platinum (target) LEED NC-v.3.0	50% of Benchmark	Student Services
Half Dome (Housing 4)	83,000 GSF	Architect: EHDD Landscape: Stephen Wheeler Landscape Architects	Fall 2013	Platinum (target) LEED NC-v.3.0	50% of Benchmark	Residential
Student Services Building	33,400 GSF	Architect: CO Architects Landscape: Cliff Lowe Associates	Fall 2013 and January 2014	Platinum (target) LEED NC-v.3.0	50% of Benchmark	Academic
Science and Engineering 2	101,900 GSF	Architect: SmithGroup JJR Landscape: Cliff Lowe Associates	Fall 2014	Platinum (target) LEED NC-v.3.0	50% of Benchmark	Academic
Classroom Office Building 2	77,000 GSF	Architect: Solomon Cordwell Buenz Landscape: SWA Landscape Architecture	Fall 2016 (est.)	Platinum (target) LEED NC-v.3.0	50% of Benchmark	Academic



LEO AND DOTTIE KOLLIGIAN LIBRARY



CLASSROOM OFFICE BUILDING



SCIENCE AND ENGINEERING 1



CENTRAL PLANT



VALLEY TERRACES RESIDENTIAL



SIERRA TERRACES RESIDENTIAL



JOSEPH S. GALLO RECREATION CENTER



THE SUMMITS RESIDENTIAL



EARLY CHILDHOOD EDUCATION CTR.



DINING EXPANSION



SCIENCE AND ENGINEERING 2



STUDENT ACTIVITIES &amp; ATHLETICS CTR.

SOCIAL SCIENCES AND  
MANAGEMENT BUILDING

STUDENT SERVICES BUILDING



HALF DOME RESIDENTIAL



CLASSROOM OFFICE BUILDING 2

## IMPORTANT RESOURCES

UC Merced Long Range Development Plan  
*University of California, Merced*  
<http://2020project.ucmerced.edu/resources/lrdp>

*Hitting the Whole Target: Setting and Achieving Goals for Deep Efficiency Buildings*  
California Institute for Energy and Environment  
[http://uc-ciee.org/images/downloadable\\_content/buildings/ACEEE\\_2010\\_3\\_734\\_UCMercedEffTgt.pdf](http://uc-ciee.org/images/downloadable_content/buildings/ACEEE_2010_3_734_UCMercedEffTgt.pdf)

*Not too Slow, Not too Fast: A Sustainable University Campus Community  
Sets an Achievable Trajectory toward Zero Net Energy*  
American Council for Energy Efficiency  
<http://aceee.org/files/proceedings/2010/data/papers/2281.pdf>

*The Great Central Valley: California's Heartland*  
Stephen Johnson  
University of California Press  
<http://www.ucpress.edu/book.php?isbn=9780520077775>

*Structures of Utility*  
David Stark Wilson  
Heyday Books (2003)  
<https://heydaybooks.com/book/structures-of-utility/>

*A Geographer Looks at the San Joaquin Valley*  
Carl Sauer Memorial Lecture, (James Parsons)  
[http://geography.berkeley.edu/ProjectsResources/Publications/Parsons\\_SauerLect.html](http://geography.berkeley.edu/ProjectsResources/Publications/Parsons_SauerLect.html)







UC Merced's Campus Design Context Overview provides a summary of the design principles and aspirations that help define UC Merced's physical realm. The concepts and images describe the fundamental characteristics of the University's setting, climate, landscape and architectural character.

UCMERCED

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